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**CONVERSATIONS**

**ON**

**INTELLECTUAL PHILOSOPHY.**

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CONVERSATIONS  
ON  
INTELLECTUAL PHILOSOPHY.

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PRELIMINARY SKETCH.

THE RECTOR AND HIS FAMILY.

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EDWARD HERBERT was the youngest son of a landowner of the middle class, in one of the western counties of England. His father, instead of spending his time in the chase or on the race-course, devoted it to the care of his own estate, to the public improvements of his county, and to the maintenance of equity and goodwill among those under him and about him; and instead of wasting his fortune in imitating the extravagance of the rich, or casting both fortune and character into the lottery of polities, in the hope of drawing a portion of the public money as his prize, he was careful gradually to save as much as should make his younger sons appear independent and respectable in any professions which they might choose, until their own talents should have a fair trial for

securing them that public esteem and confidence and patronage, which, as he well knew, are the only sure and satisfactory bases of professional independence.

But though prudence or rather good sense was the governing principle in all his conduct, Squire Herbert was neither an anchorite nor a churl. He loved his friends, and they were many. He loved the social intercourse of society; and, as rational enjoyment and not ostentation was his object, he could enjoy more of the society of his friends than less prudent men of double his income. Though by no means the most extensive estate, or the most magnificent mansion in the beautiful valley in which it was situated, Herbert Hall appeared the most trim, orderly, and thriving of the whole. Through the vigorous green trees, the mansion house looked out as white as snow; the groves and shrubberies were in the finest order, and of the most vigorous growth; the gardens were highly productive, and the fruits and vegetables all of the most chosen sorts; the domestic animals were strong, healthy, and apparently well treated; the farmers paid full value for their lands, and yet they were all very thriving men; and it was a common remark among the neighbours, that “Never a bush nor a beast died upon Squire Herbert’s manor.”

Without being, or having any title or pretensions to be, a professed scholar, or philosopher, or a leader of the opinions of other men upon any

one subject, Squire Herbert possessed the substantially more valuable part of the two former, and in his public conduct he very generally had the latter tacitly thrust upon him. He was fond of a book, and he had learned to discriminate a good one ; he observed and judged of the appearances of nature and the conduct of men with that intuitive and free acuteness which can discern the reason and the right better than if it was in the trammels of a scholastic system ; and though the local matters of a public nature seldom if ever originated with him, and he was generally among the last speakers, when they were discussed, they seldom took their final or practical shape until “ the gentlemen present had heard what Mr. Herbert had to say upon the subject.”

Though he left the technical and scholastic part of the education of his children to those who make these subjects a profession, and as not being accordant either with his abilities or his habits, yet one of his most favourite relaxations consisted in giving to them that instruction which is rendered more sweet and probably more successful by appearing to be no instruction at all. He conversed with them ; he walked about with them, so that they might have the means of observing and examining the ordinary productions of nature and art, and exercising their own judgment as to the means and modes of their production, without its being recounted to them like a told tale, calculated rather to damp than to stimulate their

habits of observation and their power of reflection. By these means, though they were completely exempted from those precocious displays of learning by which fond but inconsiderate parents often do the most material injury to their children, they had, respecting all the every day objects and matters which came under their notice, more extensive and also more accurate information than the majority of people at double their years. It was a maxim with Mr. Herbert, that he ought to teach them to find their way over his own grounds before they began to study the topography of counties, or repeat accounts of the geographical position of islands and continents ; and he thought also, that there was something incongruous in making a boy run over in an unknown tongue the descriptions of the habits and implements of nations, which had for a thousand years ceased to exist, before they could in their native tongue say any thing about the furniture of the house they inhabited, or the implements of husbandry at the nearest farm. In consequence of the local acuteness which they thus acquired, they could not fail to draw the attention and win the praise of their father's guests ; but with those guests he left them to sustain defeat or enjoy triumph as it might happen, without the least disposition to thrust them forward, or give a hint that he had done any thing more than was the natural and indispensable duty of every parent.

Somebody has remarked, that though the

youngest son runs the greatest hazard of being spoiled, yet if he escape, that he is generally the cleverest. The reason is obvious. As people advance in life they think less of themselves, and more of their children; and, therefore, with more experience, and consequently more knowledge of the world, they can hardly avoid giving to the younger branches of their families more of that imperceptible education which has been mentioned; and, which greatly enhances its value, they begin it earlier. While the world is all before a parent, as an ascent on which to rise, he is hurried on by his own ambition, and cannot pause to devote those little attentions which children require upon taking their first steps in thought; but when he has gained the level summit—especially when he has begun to descend the slope,—ambition has cooled, and he naturally finds his pleasure more in those with whom he lives than in that which he follows after. Whether it was owing to this, it would not avail much to inquire; but, though all the young Herberts were quick and intelligent, little Edward was the most quick and intelligent of the whole. He did not obtrude his opening talents upon grown-up persons. When their conversation pleased him, he remained and listened; and when it did not, he romped away. But he often baffled his brothers with his logic, or gained them over to his schemes and opinions by his eloquence. The only visitor at the hall, who visited frequently, and was some-

what subtle in his logic and lengthy in his speeches, was the rector of the parish, who, besides being a worthy man and an impressive preacher, had some *status* and name, provincially at least, in the literary world, which were no doubt a good deal magnified by his distance from London, the metropolis of letters as well as of the state. Now, as Edward appeared to hold pretty nearly the same place among his brothers as the rector did among the guests in the drawing-room or the library, his brothers gave him the name of the little rector.

Circumstances which to common observation appear exceedingly trifling in themselves, often have a wonderful effect in regulating the tone and bending the direction of the human mind ; and, very often, the merest casualty occurring to the boy, will determine not only the path through life of the future man, but the style in which he shall travel along that path. It might be so—most likely it was so—in the case of Edward Herbert ; at all events, a friendship between him and the rector commenced almost immediately upon the application of the epithet alluded to, which neither ceased nor was interrupted until the senior was dissolved from all earthly friendships ; and in his declining years, when Edward, very much to his satisfaction, relieved him in his duties, and returned in attachment and friendship the kindness which his youth had received, he used often to allude to the fortunate application of a name,

which had, in all probability, been instrumental in bringing him so much kindness and soothing at the close of life ; and given him a surety that the best interests of a flock to which he had been long and fondly attached, would not be neglected, or fail in any one respect after he was no more.

It would be foreign to the present purpose to follow the young divine through the steps of his education, either as it was communicated by the tutor under the paternal roof, or in those halls where the aspiring youth of England seek to kindle the fires of genius before the monuments of the mighty men of old. Suffice it to say, that there was never any splendour, any overtopping of his fellows—any desire to wear a name that had not been won, about him. Whatever was prescribed to him, or lay necessarily in his way, he overcame easily and well ; and when necessity called his powers into action, they excited much admiration, and, perhaps from the unassuming nature of his general habits, more astonishment as well from the clear and satisfactory manner in which he treated the subject more immediately under discussion, as from the great facility that he displayed in turning the whole volume of knowledge to the illumination of a single point.

From the style of his manner, which was at once manly and gentle, from his power of conversation, in which he had the art of blending the truths of science with the objects and occurrences of the time, and of mingling whatever is said

with that due portion of reverence for the Author of Nature, and love for the doctrines of revelation, which repress equally the forwardness of the caviller, the intolerance of the bigot, and the cant of the assumed saint, his company was eagerly sought after ; and it seldom tired, and never offended. He did not, like some young men, hunt after the connections of the great : nor did he enlist himself under the banners of any party ; but studiously preserved that freedom of mind which should enable him to select the good and resist the evil, wherever they might be found. But in this orderliness of character, which was constitutional rather than studied, there mingled neither austerity nor gloom. In whatever was consistent with a rational or a well-informed mind, looking forward to the sacred functions of the clerical office, Mr. Herbert was cheerful, and even gay ; and while, in consequence of the felt superiority of his talents, the more starched of his associates regretted that he had too much of the glee of honest fellowship for them ; the light-minded were just as loud in their expressions against that correctness of thinking and acting which prevented them from numbering him as exactly one of themselves. Year after year of his time of study rolled away, each bringing a valuable accession of knowledge, and an increased portion of esteem ; and as his father, whom he had the misfortune to lose about the time of the completion of his studies, had left him independent, he did

not need to hurry into orders for the sake of a living; but refrained from performance of those sacred duties, which were his aim, until his understanding had been thoroughly informed, and his judgment perfectly matured.

It was, indeed, hinted to him, or rather of him, again and again, that he was throwing away his time, and that one who, by talents, and by connection, and interest, might have easily aspired to the richest mitre in England, would allow the meridian of life to pass ere he was in possession of even a rectory. He did not appear to heed these matters, but quietly pursued his studies, and enjoyed his friendships; and when he was at last admitted to holy orders, at rather an advanced period of life, he did not anxiously scramble after livings, but seemed to hesitate, and think more of the importance of the duties he might have to do, than of the reward he might receive for the performance of them.

Not very long after the time of his taking orders, he went to reside with the Rector, of whom mention has been made; and the old gentleman being in a little time afflicted by a paralytic stroke, which, however, impaired his limbs more than his understanding or his power of utterance, Mr. Herbert tendered his professional assistance in a manner which it would have been difficult to resist. The Herbert family had been long and deservedly respected in the neighbourhood, and the circum-

stance of Mr. Herbert's ascending the pulpit of his native parish certainly did not tend to lessen the number of those frequenting the church. The venerable divine whom he assisted was somewhat of the old school, as he had received his education at a time when grace and eloquence were not much attended to by pulpit orators. But, though Mr. Herbert did not exactly follow in the same course, his deviation from it was so gradual, that it was hardly perceived by the Rector himself. In a country parish, any thing fine, flowery, or learned, would have been of course out of place ; but the instruction which even a plain people receive on so sublime a subject as religion, does not need to be, and, in the hands of a man of education and taste, cannot be, wholly the opposite. Accordingly, in the course of a short time, the ministration of Mr. Herbert was sought after by a considerable number, who, in former times, had not been accustomed to travel so far to church ; and though he was merely a gratuitous assistant, or, if the epithet be better liked, an independent clerical gentleman, assisting an old and respected friend in the performance of those offices for which the infirmities of age rendered him unable, he acquired an influence in the district and the diocese, greater perhaps than was possessed by those who had been beneficed for a number of years. This he did not seek. On the other hand, he appeared to avoid it ; but, just as was the case with his father's influence

in the county, it was imposed upon him, because those by whom it was done, felt that it was conducive to their own advantage.

The respect which the talents, the manners, and the faithful and energetic discharge of his duty procured for the young divine, so far from exciting any jealousy on the part of his venerable friend, only served to bind them in a closer friendship ; and as the conversation of Mr. Herbert was a source of continual pleasure and soothing to the old man, he loved him as though he had been his only son. This paternal regard was divided only with one other object ; the old gentleman who had been a widower from almost the commencement of his married life, had an only daughter, the image as he said of her mother, and the inheritress of the virtues of both. She was indeed an amiable female, just in the very bloom of her beauty, with a mind stored with all the treasures that the most careful education, and the counsels of a kind father could bestow. Formed by nature, by education, and by the expectations that she was entitled to entertain in the matter of fortune, she was calculated to shine not only in the first provincial society, but, if such had been her lot or her desire, in the most fashionable circles of the metropolis. But Mary Howard cared not for the blandishments of society : a desire to administer to the comfort of her father was her only care. The Rectory was delightfully situated : one of those romantic edifices that carry one back through a

long succession of ages, and which yet contained more of the elements of real comfort than are to be found in the gay and flimsy mansions of modern times. The gardens, the walks, the trellises, gay with the most chosen shrubs, in continual bloom ; the little green-house, stocked with the choicest exotics, and all the little elegancies which Mary delighted to tend and cherish, gave the place something the air of a terrestrial paradise, and made it accord well with the sacred character of the inhabitant. The church too, which had stood the ravages of more than three hundred years, without being altered almost in a single stone, or a peg of timber, was one of the choicest remains of the sacred architecture of England, when that architecture was in the zenith of its grandeur. Standing in a mild atmosphere, and being originally built of a very durable as well as beautiful stone, the marks of the chisel were almost as fresh upon it as upon the day of its erection. The tower rose to a considerable elevation, gracefully embattled and turretted, but without any of those minute parts of which the beauty is lost in the elevation, and which are too frail for giving the appearance of age, or the promise of duration. The buttresses and spandrels were adjusted to the strain they had to resist, with that requisite knowledge of statics of which the Gothic architects appear alone to have been masters ; the windows were so numerous as to make the whole of the interior one volume of light ; but as every pane told its sacred story in

those glowing colours of ancient glass, which the moderns have hardly yet equalled, the light came softened from the external glare, and fell in pencils of glory, which contributed not a little to the awe which the devout naturally feel in the interior of such a place. The pews, the screen, and the internal furnishings were of ancient oak, which had become black as ebony in the lapse of years, but which had acquired firmness rather than decay from its long duration. The screen in particular was of exquisite workmanship,—the carving in relief being so bold that the figures, flowers, and emblems, set off by the masses of shade, and the hollows between, appeared to be detached and floating in the air. The elms, with which the churchyard was cinctured, might have stood their hundred years; but in front of the western or principal entrance, there was a yew tree, the full growth of which was beyond the tradition of the place.

It had been scathed by lightning; it had been reft by storms; but there seemed a principle of endurance in the rifted trunk, which speedily became green at top, after every disaster that it had met with. In the whole place, indeed, there was much whereon to meditate, and from which to derive information; and while Mary Howard had not neglected the page of human, or the more sacred page of divine instruction, she had diligently perused those interesting leaves of the book of nature that were scattered around; and, com-

bining the three into one consistent system, she had prepared herself for turning them alike into sources of pleasure and incentives to virtue. With these, and with the society of her father, she found no vacancy in her time, no blank in her enjoyment ; or, if any appeared, it was instantly filled up by deeds of beneficence to the people about her.

It was hardly possible for two young persons, so dispositioned, and so endowed, as were Mr. Herbert and the daughter of his venerable friend, to live together under the same roof, without the inhabitants of the neighbourhood making some allusions to present attachment and resulting matrimony. Accordingly, among those who made a conversation of such matters, and especially such as had daughters that they would have been anxious to see married to the gentleman, or sons who would have been delighted to receive the hand of the lady, the young inmates of the rectory were named a dozen of times before either the one or the other entertained a single idea beyond the conscientious discharge of their duties in a single state. It is true, that Mr. Herbert was not a youth, to be led away by inconsiderate passion, as he had well nigh reached his fortieth year at the time when he first exercised his sacred profession ; neither was Mary Howard a giddy girl, for she had attained those years at which the female form is supposed to have received its perfection of symmetry, and when the female judg-

ment and understanding are in the very noon-tide of their vigour.

By degrees, however, the courtesies which had become necessary for them to interchange, and the attachment that they both felt for the old gentleman, led them to entertain thoughts of an ultimate union, perhaps before they themselves were aware. Nor did the father in anywise check the growing attachment. He felt, from his great years, and the shock that his constitution had received, that his future time upon earth would be but short ; and it was both natural and his duty that he should wish to see his Mary settled under the protection of one to whom he could confide an only daughter, who had been to him such a treasure, before the hour should arrive when he himself should sleep in the dust. And he had that gratification. It is foreign to the purpose of the narration to detail the progress ; but the last act of his sacred duty, which the venerable rector performed, was the uniting of Mr. Herbert with his Mary ; and there upon he resigned in his favour the living, to the successorship of which, Mr. Herbert, who had received his degree of Doctor at the very same time, had previously been appointed.

Of the happiness that such a couple would enjoy—of the care that they would bestow upon the first openings of reason and exercises of thought in their infant offspring—it would be unnecessary to dilate. Their union was in a few years blessed with two sons and two daughters ;

but in attempting to give birth to a fifth, the lady paid the last debt of nature, and left her affectionate husband alone in his grief, as the children were of too tender years for participating in it, and as her venerable father had gone before.

It were needless to say that the bereavement felt by Dr. Herbert was severe: those who have not known such bereavements cannot enter into the feeling; and those who know, do not wish to be reminded how keen it is. But though a man, whose mind is stored with philosophy, and enlightened by religion, feels the vicissitudes of life as keenly, if not more keenly, than other men; yet he neither "sorrows as those who have no hope," nor does he strive to hide his grief in the bustle or the dissipation of the world. His religion teaches him to "turn to the smiter," and be resigned to the Disposer of events, how much soever the disposing of them may be contrary to his own wishes; and his philosophy tells him, that life can be only with the living; and that the thoughts and actions of man, in this world, cannot penetrate into or beyond the grave, to warm the dust that is mouldering, or soothe the spirit that has gone.

Accordingly, when the first paroxysm of his grief was over, (for that is too powerful for philosophy, and not forbidden by religion), he began to show the depth of his affection for her of whom he had been bereaved, by the most effectual means that were in his power. When Mary was alive,

they used to be rivals in the cultivation of the little ones ; and now that she was no more, he endeavoured to take the double duty upon himself ; and found, in directing the steps of his children in the first paths of knowledge, or, rather, in removing the obstacles, so that they might direct themselves, the highest consolation that a widowed father, and the most delightful occupation that any father can enjoy.

The plan which the doctor followed, or rather the practice which he pursued without any plan (for plans of education are generally formed on mere hypothesis, or drawn from an analysis of minds full-grown, and already educated, and therefore inapplicable to the case of children), was not to heap upon the infant mind those masses of rules and maxims of which it cannot possibly know the use, or those muster-rolls of words of which it cannot possibly know the meaning ; but to learn them for some time to educate themselves in the knowledge of the material objects and the every day phenomena, that they found around them, which they could of themselves in so far understand, and about which they could think. All that he attempted in the way of direct instruction, till they had reached the fifth or sixth year of their age, was to correct the judgments and opinions they had formed when not correct ; and to solve any little difficulty that might come in their way, when they applied to him for such a solution. But being aware, that the grand cause of mental strength

and courage, at every age, and in every degree of advancement, consists in the feeling that the inquirer is going and not led, he was careful never to correct error or solve difficulty as if upon the *dictum* of authority. He uniformly drew out all the knowledge that they had upon the subject, about which they appealed to him, as well as arranged all that they knew upon collateral and analogous subjects, so as to bear upon the error to be retracted, or the error to be mastered. By this means, he ascertained exactly the compass and strength of the mental instrument he had to direct; and thus was enabled to steer a middle course between that pedantry which renders the young mind indolent, by telling it, upon all occasions, what it should believe, and that harshness which will not take out of the way the obstacle that cannot be surmounted. By proceeding upon these judicious principles,—the only ones by which the extent of real information, the real difficulties, and the powers that are to master them, can be ascertained at any age, and more especially in the beginning of study, when one step forms so great a portion of the whole, and consequently one injudicious step does so much injury to the whole, the progress made by the children of Dr. Herbert, as compared even with that of children of the same age, and with inferior opportunities, appeared to be small. Nor was the apparent inferiority in degree only; for it was perhaps more striking in kind. The knowledge of other

children was learning—at least something that usually goes by the name; that of the Doctor's children was, as the country people say, “what any body could know if they chose to take the trouble.” It was found, however, that not only children, but those who were advanced in life, and had pretensions both to elegance and knowledge, had not chosen to take the trouble; for when they entered into conversation with the young Herberts, and the latter pushed in the subject of common observation as far as the point of difficulty, at which they usually had to appeal to their father; the seniors found themselves very considerably distanced, and concealed their mortification in a sort of sentimental regret, that children, who were so acute and sensible on common matters, should be so very backward in their learning. Sometimes a kind friend would remonstrate with the Doctor upon this subject; but he generally repressed them, by some such observation as that children ought not to be sent to perform the labour of men, or that it was not the wisest plan to grasp at the end without knowing something about the beginning.

In course of time, however, and when, by means of the discipline that the Herberts had had in matters not above their comprehension, they began to have their attention directed to what is usually called education, their progress refuted and even confounded those who had ventured to remonstrate on the injudicious plan pursued by the father.

Before they began to read, they were in possession and accurate understanding of a vocabulary of ordinary words, more extensive than is perhaps understood by many who are grown up, and aspire to the name, and possess some of the reality of learning. Thus when they addressed themselves to their books, the exercise was not to them a new one ; it was merely a repetition in another form of that with which they had been well acquainted before ; and if on account of the mere abstract nature of any of the words, the book presented difficulties, which had not been found in the examination of real things and phenomena, the novelty of the process probably made amends ; and as it is said of Newton, that he bounded from the first axiom to the ultimate proposition of the geometry then extant, by merely reading the enunciations, and never conning the demonstration of a theorem, or performing the solution of a problem ; so did they bound from step to step of their elementary education with not much more occupation of their own time, or much more labour to their father, than when they were acquiring a knowledge of the articles of furniture in the rectory, the implements of the tradesmen and farmers in the village, and those occurrences of nature which can be comprehended without any necessary allusion to the principles of science.

In the course of this progress, the Doctor was especially careful that the knowledge which they derived from their books should be incorporated,

and made one with that which they had previously acquired by observation and oral inquiry, and that they might always perceive that, at every stage of their acquirement, the acquisition that they had made was of comparatively little value, singly and in itself, but derived the whole, or at least the greater part, of its importance from the light that it threw upon the past, or the prospect that it opened of the future, from its shewing the usefulness of some former acquirement of which the utility had not then appeared—from its letting them see that there were other and higher eminences to which it behoved them yet to aspire—and from the confidence that it gave them, that, in the strength of their own minds, they had a resource that would lead them on to knowledge, and, through that, to virtue and esteem, even though accident should deprive them of any other means of tuition.

Aware that a cultivated mind is as essential to the development of the female character, and the happiness of females as it is to those of the other sex, Doctor Herbert made little distinction in the intellectual and moral part of the education of his boys and his girls. In those practical, or, as we would say, professional parts of education, which point to the division of male and female life, and to the different duties which, when grown up, they are called to perform, the necessary distinction was made. The Doctor had a tutor, a man of good sense, and extended technical infor-

mation for the professional education of his two sons ; and his sister, a maiden lady, a year or two older than himself, who had become his house-keeper soon after his bereavement, assisted by an accomplished governess, attended to the young ladies in those parts of their education which are essentially female, rather than intellectual. In all, however, that was requisite to make them rational and intelligent, to give them strength of mind, and courage and determination to put that strength properly into execution, the Doctor took the task upon himself ; and even in the more formal and technical portions, he was always ready to second the exertions of the professional instructors by pointing out the practical advantages to which the lessons inculcated by them would of necessity lead.

The little difference that there was between the ages of the four children, and the number of years that were allowed to pass over their heads before the formal part of their education began, and it became necessary for their father to throw his instructions more into the form of a lecture, than when he answered their questions, and directed their observation as mere children, enabled them to be brought together into one class ; or, rather, as young friends on a footing of equality, who looked up to their father with that reverence and esteem, and yet, with that perfect confidence which subsists among persons of different ages, in well-instructed and well-regulated society. The opi-

nion of none was despised on account of its being premature, and the objection or inquiry that was made in the simplicity or the ignorance of youth, was treated with the same respect as if it had come from one of the same years, and the same information as their parent. The grand object at these times of conversational instruction was, that each should come forward without restraint, not as if seeking absolute information, but in order to ascertain whether the information, apparently spontaneously acquired, was not what it ought to be. In this way there was never any tediousness, any reluctance, or any difficulty felt in rising to the greatest height, or descending to the lowest depth. The doctor was studious that they should never come to any subject without the requisite preparation, and when the apparently least informed of them expressed a doubt, or betrayed hesitation, it was held as a proof that the line of proceeding was not the best adapted, and that was altered accordingly.

On these occasions, Miss Herbert, the governess, and the tutor might be present if they chose, and generally it was their choice. But the Doctor was not solicitous that the two latter should frequently give their opinions. Not that he was not kind to them, for he treated them in every respect as his equals, but because he did not think it exactly prudent that the opinions of a teacher should be subjected to observation, and probably to exposure, in the presence of pupils; as that could

not fail to lessen, in some degree, that reverence for the instructor, which, notwithstanding the most careful mental discipline, is always necessary to ensure the proper attention of the instructed.

The order of succession which Dr. Herbert followed in the subjects of those conversations, was that which appeared to him to lead most gradually from the objects of the senses, and other subjects of a familiar nature, to those which are more abstract, and must be pursued by severer efforts of reasoning and analysis. As the celestial bodies are among the subjects that first arrest the attention of the young, the system of the universe, with the phenomena, periods, and laws of the planetary motions were among the first subjects to which he directed their attention, in what is usually called a philosophical manner. Perhaps this was judicious ; as the science of astronomy, at the same time that it is the most sublime, and gives the greatest expanse to the mind, is the most simple in its principles, and the most complete in its details ; motion and gravitation being the immediate causes of all the phenomena. The composition of the air which we breathe ; its uses in the general economy of nature ; the variations in it, that are produced by the presence or absence of the beams of the sun, and those which arise from the different meteoric appearances ; with the phenomena of the ocean, and the structure and inhabitability of the different parts of the globe, followed as the next step in the chain of that species of popular education, which,

after all, is the most philosophical. Then the plants with which the earth is clothed ; the countries that produce them ; their habits, when in a state of nature ; the most striking changes produced in them by culture ; and the uses to which they have been turned by man, formed another, and a naturally successive link. Then came the animals with which the earth is peopled, with all the diversities of their forms, the peculiarities of their habits, and the varieties of their dispositions. After this, the globe itself, so far as an acquaintance with it is essential for general knowledge, and all the substances that are obtained out of it for ornament or for use, well nigh completed for them the volume of creation, with the exception of the single and singular page that relates to man.

Along with this, however, what are called the sciences were not neglected : mechanical philosophy, as it relates to the phenomena and properties, both of solids and of fluids ; optics, with the melting of the sunbeam into its many and brilliant hues ; and the wonders of the telescope and the microscope,—the one bringing near to man all that is too distant for his ordinary observation, and the latter magnifying to him whatever is too minute for his powers of vision ; together with those singular properties of substances to which the names of electricity, galvanism, and magnetism have been given. Nor was that youngest but most wonderful of the sciences, chemistry,—that science which has armed man with a new power,

introduced him into the laboratory of nature, and enabled him all but to emulate her in the performance of her works, left unnoticed; but explained as a means of acquiring information, and an instrument in the hands of the artisan, to which, even before men were aware of the principles whereupon it is founded, they were indebted for some of the most useful and the most splendid substances that they possess.

In the course of these instructions, Dr. Herbert would often intimate, that there was yet a science which, in its beauty and its importance, was superior to them all; that there was a something to be studied, more mighty in its power than the masses of the planets in full velocity—more rapid in its transitions than the beams of the sun themselves—more wonderful than all the inventions of human art—more profound, and more worthy of being studied, than all the depths of natural science,—the mind of man, that could grasp them all—the instrument which, as it were, took up the earth in the hollow of its hand, which counted the grains in the sun, measured the distances of systems of worlds, entered into the secret work-house of nature, taught art to bring her information from thence, and, having mastered all the mighty phenomena of the universe, could yet aspire one step higher,—could stand upon the summit of them, know something of Him who made them, and kneel down in reverential adoration of a Being—the only being within the ken of mortals—whose powers are

greater, infinitely greater, than those of intellectual man himself.

Before proceeding to analyse those conversations in which Dr. Herbert conveyed to his children his notions on the science of the human mind, and with the substance of which it is intended that the remainder of these volumes shall be occupied, it may not be amiss, not merely for the sake of gratifying the reader's curiosity, but of showing at how early an age the most sublime truths of philosophy may be understood, and the most important principles of morality rooted in the mind, if that mind has been duly disciplined for their reception, and they be presented to it in their real substance, and not in those incomprehensible forms in which they have been but too often disguised,—it may not be amiss, for these purposes, to mention the ages of the children, and the general aspect of each of their characters at that period of imperfect formation—imperfect, of course, notwithstanding all the care bestowed upon them; for who would wish that the characters of a family should be formed, when the eldest had not completed the seventeenth year?

Mary Herbert, the eldest, was nearly of the age that we have mentioned. In her external deportment she was reserved, and her questions were comparatively few, but they showed, from the circumstance of their always going to the essential point, or the substantial difficulty of the subject

under consideration, that, though her mind was comparatively silent, it was never idle.

Charles, who was usually accounted the second, although he had a twin sister, was a few months turned of fifteen. In his disposition he was somewhat gay and careless; and though passionately fond of information, his taste lay more in the beauty than in the depth,—he was better pleased with the splendid views and grand structures of knowledge, than with the examination of the foundations on which they rested.

Matilda, his twin sister, had something analogous in her character, though, when a matter of argument or inquiry came to a difficulty, she was accounted the more acute of the two.

Edward, the youngest, who was turned of thirteen, was different from all the rest, and had more apparent quickness, especially in discerning the flaw of an argument, or the inapplicability of an illustration, than any of the rest. It is not meant to be asserted that he was pre-eminently the favourite of his father; but being the youngest, he probably enjoyed the greatest license of speech, and his brother and sisters often made him the vehicle of inquiries and requests that had originated with themselves. Something too might be attributed, at the time to which we principally allude, to his being at the period just between the gay carelessness of the boy, and the opening diffidence of the youth.

These notices are of course not made with a view

of anticipating what may have been the ultimate character of any of the four, or of attaching importance to any remark that they may have made, as bearing upon the subject abridged in the following conversations; but merely to gratify that curiosity, and point that hint of not useless information to those who are concerned in the culture of the minds of others, which have already been alluded to.

In some parts of the following pages it may seem that the observations made by the young Herberts, are not exactly in unison with those usually made by persons at their years. It ought to be borne in mind, however, that the system of education of which they had the advantage, was very different from that which falls to the lot of the majority of other persons; and not only so, but superior to that which was enjoyed by their father. It has been mentioned that his instruction was in a considerable degree paternal and rational as well as theirs; but as his instructor was not a person of so extensive information as himself; as his habits were not so exclusively literary and philosophical; and as he had it not in his power, from the necessity of attending to the duties and the pleasures of a more active life, to devote himself so entirely to the business of education, Dr. Herbert was a tutor of a superior order, and in more advantageous circumstances than his father. These considerations may well account for those differences in intellectual tact, which sometimes appear even

between the children and the father, and would lead one who did not take the difference of education into the account, to suppose that on some points they were almost intuitively wiser than their instructor. The general inference which ought to be drawn from any disparity of this kind that may appear, is the advantage of carefully adapting every subject of education to the former experience and acquirements of the pupil ; and making it so perfectly plain and rational throughout, as that no one step may be felt more difficult than another ; and were this generally done, the real wisdom of the world would be doubled at half the present labour.

## CONVERSATION I.

NATURE, IMPORTANCE AND EXTENT OF INTEL-  
LECTUAL PHILOSOPHY,

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EDWARD.

My dear father, some time ago you promised to let us know something about the nature of the mind ; and you told us that the science which treated of that, was more wonderful, more interesting, and more extensive than any or than all of those upon which we have conversed already. Now, I have been thinking on the subject, and as the mind is nothing that can be seen, and a man, taking him altogether, is thought tall if he be six feet high, I cannot see how there should be here any thing more wonderful than the making of a solid substance, by the mixture of two portions of invisible air, which we were shown in chemistry—more interesting than the separating of the light of the sun into those beautiful colours which I can obtain any sunny day, by holding the prism to the

opening of the shutters—or more extensive than astronomy, which reaches not only to the distance of the sun, but to the Georgian planet, when at the greatest distance on the opposite side of that luminary.

## DR. HERBERT.

I am much gratified to find that you think so highly of your chemistry, your optics, and your astronomy, and I hope your respect for them will increase; but though you have a high respect for these, and though they may be among the most important matters with which you are acquainted, it does not follow that they are the most important with which you can be acquainted. You, no doubt, remember, that when we set out for London, you said there could not be a larger building than our own church: and yet you saw St. Paul's, and said you were as much fatigued in going to the top of it as if you had walked five miles.

## EDWARD.

I know that, father; but you know the church was made by men, and I thought men could make as large a church here as any where else. The things that I have stated are not made by men, and so I cannot see how men could find out any thing more interesting and greater than they are.

DR. HERBERT.

That is what older folks than you, Edward, are apt to think about the last things they have learned ; but it is not the better founded on that account.

CHARLES.

I think Edward is wrong, father, in arguing about the possibility of what we are to converse on being greater and more sublime ; I would rather hear on what account it is so.

DR. HERBERT.

That is told in few words. Let me ask you how wonderful the chemistry, how beautiful the optics, and how sublime the astronomy, are to John the coachman ?

MARY.

I do not think, Sir, that they can be any thing to him at all, for he knows nothing about them. He can barely read the address of a letter, and not even that if the hand-writing be not all the plainer.

DR. HERBERT.

Then, my children, do you not perceive from this, that, to any human being, the sublimity, the beauty, the magnitude, or any one interesting

property of any thing, does not depend upon that thing itself, but upon the faculty of the mind that perceives it. John derives no pleasure from the sciences, and probably very little from the bounty of nature that is scattered around us, except in so far as it contributes to his own personal and bodily comfort. The world is thus limited to him ; but it is not for any diminution in itself: neither is it, probably, on account of any deficiency of original faculties in him to discern in it those qualities which are so interesting to us ; but merely because nobody, when he was young, took the trouble of pointing those matters out to him, and that, instead of cultivating his mind as we are happily enabled to do, he was under the necessity of working for his living. You admire, do you not, the rich green of the fields, the clear blue of the sky, the changing colours of the clouds, the sparkle of the stars, and all those brilliant hues which in succession adorn the flower garden and the green house?

## MATILDA.

I am very fond of them, papa, especially the flowers.

## DR. HERBERT.

Then if you had had the misfortune to be without eyes, where would have been all this pleasure to you ? So also if you had been without ears,

you would have been shut out from the sound of music, and the more important ones of instruction ; and, in that state, the world would have been still a greater blank to you than it is to John the coachman.

## EDWARD.

But seeing and hearing, father, are not any part of the mind ; they are two senses of the body, as Mr. Williams told us the other day : and you remember telling us, how like the eye was to a camera obscura, when you first showed us the picture of the church in that ; and how there is some resemblance between the form of the ear and the hearing-trumpet, which, you know, makes so loud a noise when one only whispers into it.

## DR. HERBERT.

The eye and the ear are certainly organs by which the mind perceives, just in the same manner as the hands are organs by which the mind acts, and the feet organs by which it walks. The camera obscura, which reflected the image of the church upon the glass, did not itself see the image ; the hearing-trumpet that increased the sound of the whisper, had itself no knowledge of that sound ; and, in like manner, if it were not for the will or wish of the mind, the hand and the foot would remain at rest ; and, as pieces of matter, have no tendency, but, like other pieces of

matter, to sink in a fluid of less specific gravity than themselves, or swim in one which is of greater. Whatever we know of the appearance of the external world, or of any part of it, as viewed at a particular instant of time, or whatever we know of it as changing with the change of years, we have, and we can have, only through the medium of the mind ; and therefore the mind, which is the source and measure of all our knowledge, must not only be to us a matter greater and more important to be known than any one branch or portion of that knowledge, but greater and more important than the whole of it taken together.

You have expressed, and I am sure you have felt, much pleasure as we traced the progress of those illustrious men who have made us acquainted with the properties of matter, from the magnificent system of the sun and planets that run their courses through the immensity of space, to the small animalculæ revealed by the microscope—thousands of which are hardly equal in bulk to a single grain of sand, but which, in that extreme of minuteness, are as perfect in their parts, and as lively in their motions, as any of the animals of larger growth which we can discern without the aid of any microscope. I mentioned to you that, neither in the way of magnitude nor in that of minuteness, can we limit the workmanship of the Creator to that which we have discovered ; for the chain of material being may extend both ways farther than it

has yet been examined by the most careful inquirer, aided by the most powerful instruments. When we compare the astronomy of modern times with that of the wisest of the ancients, and also the researches into the minuter portions of matter, whether living or dead, with what was the limit of their knowledge in that way, we see no reason to doubt the conjecture of Dr. Herschel, that the sun of our system is but the attendant of some system that is mightier ; or that there might dwell between the particles of substances which to us appear simple, solid and compact, whole nations of animated beings, to whose perceptions the particles of those substances may appear as gigantic and as remote, as the sun and the planets are to us.

## CHARLES.

But, father, all the hope of future discovery, which is thus held out, must—according to the principle which you taught us, that like causes produce like effects—be the result of the improvement of instruments, and a more careful examination of the wonders of nature, and so has nothing to do with the study of the human mind.

## DR. HERBERT.

Have patience, Charles. To what but the mind itself are all these discoveries owing ? The courses of the planets, and the centrifugal and centripetal forces, by which they are made to revolve in their

elliptic orbits, were the same in the days of Ptolémy, nay, before one astronomical conjecture was made, as they were in the times of Kepler and Newton. The mountains and vallies in the moon, the satellites of Jupiter and Saturn, the rings of the latter planet, with the Georgian, and those lesser bodies of more recent discovery, were the same for ages before Galileo, or Herschel, or Olbers directed a telescope to the scrutiny of the heavens. So, also, there were animalculæ in those fluids in which they are now found, long before the days of Leuenhoeck or of Baker. Now, tell me, why the men a thousand or two thousand years ago, did not make the same discoveries ?

## EDWARD.

They had not the telescopes and the microscopes ; neither were they so well acquainted with the properties of matter, or the applications of mathematics.

## DR. HERBERT.

And where did the moderns find these things ? Did they gather the instruments from trees, like apples, or reap the mathematics in a field like a crop ? No. They owed them all to more vigorous and better directed exertions of mind ; and you will find wherever one improvement has been made—wherever any thing has been added to the volume of human knowledge, or any new machine given to the arts, or any new convenience or ele-

gance to the accommodations of life—we invariably owe it to something superior in the exertion of the mind. This shows us, that, of all things or principles with which we are acquainted, our own minds are the most deserving of our attentive cultivation; because they repay that cultivation best, as well in additional enjoyments to ourselves, as in additional benefits to our fellow-creatures. When we see that, in the course of ages, men have come from conjectures, that appear to us exceedingly absurd, to the clearest demonstrations on the most sublime subjects; and when those who have done these things have not been much more than as one in a million of the whole human race, we cannot help feeling that if the minds of the million had been as well tutored and exercised as theirs, our stock of information, great as it is now, as compared with that of our distant ancestors, would have been inconceivably greater.

## MARY.

But as a large proportion of the people must always have been occupied with labour, just as they are now, they could not have had time to pay this attention to their minds.

## DR. HERBERT.

The time required for this purpose is much less than many persons suppose. Those who are engaged in labour which is merely mechanical, will not work the less, or the less agreeably, that they

are thinking all the time ; nay, instead of this, there is nothing so well calculated to relieve the tediousness of mere labour, or to prevent those who are engaged in it from falling into dissipation in their hours of rest, as a habit of thinking ; and we might instance the Scottish poet, Burns, and a number of other persons, who, when following very laborious occupations, thought as much and as well as the professional philosophers, who have nothing but their studies to occupy their attention.

#### MATILDA.

But, father, in our geography, our astronomy, our chemistry, and all the other matters we have studied, we had something to look at, and something to assist us—our globes, our maps, our telescopes, and all the rest of the apparatus ; and in studying our own minds, which, I suppose, is what you mean by intellectual philosophy, we have nothing to look at, and no apparatus to assist us.

#### DR. HERBERT.

You mistake, Matilda. In studying the mind, we have the whole world to look at ; for all that we know of that is through those very operations of the mind which are the subject of intellectual philosophy. More than this—in the most important part of the business, our book is always open, and our apparatus is ever with us and ready. In

studying the material world, we must either look at the parts of it, or read the description of them in the writings of others ; and we are constantly interrupted by the absence of that which we need. If you would study those heavenly bodies that are visible to the naked eye, a cloudy night shuts you up in ignorance. If you would study the minuter ones, you must wait till you get the telescope. If you would study chemistry, you must get the apparatus in order ; if botany, you must wait till the flowers are in bloom. In short, there is not one portion of the science of external nature which you can have at all times, and under all circumstances, under your command. If you are unable to procure the substances and the instruments, you must remain altogether in ignorance ; and though you are able to procure them, you must suspend your study, except in mere reflection upon what you have already learned, whenever you are called away from them. But when one's own mind is the subject, it is alike open to all ; it costs no book, and no apparatus ; and you never can be absent from it, since you of necessity carry it with you wherever you go. In consequence of this, the mind is the most generally and constantly accessible of all the branches of human study. At the same time, it is the one in which all mankind have the deepest interest. With many of the subjects of the others, there are few persons that have much to do ; but everybody has a mind of some degree of capacity or other : and,

therefore, everybody is interested in studying the nature of the mind.

CHARLES.

You have always told us, in everything that we have studied, that mere speculative knowledge is not, strictly speaking, knowledge at all ; and that if what we study does not tend to make us better men, and fit us for a better performance of our duty, the time that we devote to it is worse than wasted, because we lose the time, and also what we might otherwise have learned in the course of it. But you have not told us what advantage we are to gain from the study of our own minds. All that you have said is about the grandeur of that study, as a mere matter of speculation.

DR. HERBERT.

To do it well, Charles, we must do only one thing at a time ; and as I was about to tell you some of the uses of this branch of knowledge when you made the remark, I shall mention a few of the most obvious now.

In the first place, the study of the mind tends very much to the improvement of the mind itself ; and makes us better able to apply it to every thing else. The mind is, as it were, the instrument with which we find out every thing we know ; you have read from history, that those who have improved it, have been enabled both to know and to do many things which they who have not im-

proved it could not even attempt ; and unless we understand anything well, we can neither improve it, nor put it to rights when it goes wrong. None of us could make that clock upon the mantelpiece go a month or a year without being wound up ; and even when it gets out of order, we cannot set it right, or tell what is the matter with it—we have to send it to the clockmaker. Just so, if our minds are not strong enough, or in proper discipline for understanding what we wish to understand, we cannot put them to rights without knowing the nature and machinery of them ; and as nobody can know anything about the particular state of our minds, further than we are able to tell them, we must, in these cases, be clockmaker to ourselves.

## EDWARD.

But, father, if it be necessary that we should know all about our own minds before we can be sure that we are able to understand other things properly, should not that have been the very first thing that we ought to have learned ? because all that we have been attending to already may be wrong, just because we have not known whether our minds were fit for understanding it or not.

## DR. HERBERT.

Your observation, Edward, is quite a natural one ; and there is only one objection to making the study of the mind the first part of education ;

namely, that it is quite impossible. As we shall explain more at length afterwards, we know nothing about the mind, but in so far as it is affected by other things ; and, therefore, we cannot be taught anything about it, till we know something about a good many of the things by which it is affected. I mentioned, that we may consider the mind as a sort of tool or instrument with which we work ; and, this being the case, we must be trained to the use of it at first, just as we are trained to the use of other tools and instruments. The carpenter does not begin the instruction of his apprentices, by explaining to them the nature of saws, planes, and adzes ; neither does the blacksmith begin by lecturing about fire and bellows, and hammers and anvils. They well know that such lectures would never enable the lads to make a peg or a nail ; and, therefore, they put the tools into their hands, and make them learn the use of them by practice ; and there are many expert workmen that understand very little about the nature of the tools with which they work.

## CHARLES.

Then, if they become expert without the knowledge, might not that be dispensed with altogether ?

## DR. HERBERT.

If there were to be an end of all improvement, it might ; but you have been told again and again,

that England owes the whole of her superiority in the useful arts, and much of her high place among the nations, to improvements in the tools and engines with which her artificers work ; and these improvements could not have been made, if those who made them had not very carefully studied those formerly in use, and found out both their defects, and the means by which these might be removed. In a similar manner, it has been by a diligent study of the mind, and a careful finding out of errors, in thinking, believing, and judging, that real knowledge has taken place of the subtile and unmeaning theories, which, as you were told, used to be maintained by the very ablest of mankind, about the appearances and laws of the external world, and the yet earlier absurdities which were taught and believed respecting the mind. In the great history of the world, this has been done by the men of one age making improvements upon the men of the ages that went before them, (which has been wonderfully accelerated since the invention of the art of printing allowed nothing to be lost) ; and in the little history of every individual, it is done by correcting in every successive year and day the errors of the former.

## MATILDA.

Will you mention some of the other advantages, for I am sure we must all admit the truth of the one you have mentioned.

## DR. HERBERT.

Many of the others, my children, are merely consequences of that : for when we have said that any thing that improves our mind makes us better able to distinguish between right and wrong, and truth and error, we have said the very strongest thing that can be said in its favour ; but I shall mention a few others, and if you have any remarks to make, have the goodness to reserve them till I have done, as by that means we shall the sooner get to the subject itself, with which I am sure you will be equally interested and gratified.

The philosophy of mind gives a union to all the branches of our knowledge, because we find a counterpart of every thing in our own perceptions of it ; and when, along with the mere notion of every object, as a part of the external world, we consider how we are affected by it, we make it our own : as when we consider the rose that may blossom in the garden that we have not seen, it is comparatively indifferent ; but when, along with it, we consider how its form and its colour are beautiful to our sight, and its perfume pleasing to our smell, we make it our own—the beauty and the fragrance belong to us, as well as to the rose.

Unphilosophical opinions about the nature of the mind, and the modes of its operation, were the chief causes of all those errors which, for so many ages, concealed from man the true laws of

the material world ; and it is chiefly because such men as Bacon dispelled the mist which brooded over the philosophy of the mind, that our natural philosophy and our chemistry have become so consistent in themselves, and have done so much for the arts.

In all that relates to the beauty and the power of language, the knowledge of the mind is most essential ; and he who attempts to instruct or to persuade, to arouse or to soothe the feelings, or to act upon the minds of other people, in any way, either for his own purposes or their good, can have but slender hopes of success, unless he know the nature of the mind, and the way in which those feelings can be touched. The difference between sense and nonsense, eloquence and tediousness, or wit and dulness, consists more in the presence or the absence of knowledge of the mind, either on the part of the addresser or the addressed, than any thing else. When you saw the woodman cleave the huge block of timber with the little wedge, would he have effected his purpose if he had either attempted to drive the wedge with the back foremost, or placed it across the fibres of the wood ?

EDWARD.

I beg your pardon, father, but the woodman did not know any thing about the theory of the wedge ; for I asked him, and he could not even

tell the relation between the force applied to the back, and the resistance on the sides.

DR. HERBERT.

I thank you for that, Edward, though it be an interruption, as it will enable us to get at one object, to which, otherwise, we should not have arrived, without some preface.

MARY.

Edward will be our wedge, then.

DR. HERBERT.

Precisely so ; and we hope, by repeated blows of the mallet of thinking, we shall make him cleave the block. The woodman did not know the properties of the wedge as a mechanical power, but he knew what it could do, and how to do it ; and this is just the kind of knowledge of the mind which intellectual philosophy seeks. Besides the properties of the wedge, or of any other instrument made of matter, that appear in the using of it, we can have other properties, such as its form, or the stuff that it is made of, and we may be acquainted with these properties, without knowing how to use the instrument ; but in studying the mind, we have nothing but the uses of it ; we know not what it is made of, what it is like, or any thing respecting it, as we do about the real material beings that are the objects of the senses, or the imaginary ones that we can form to ourselves. All that we can

know about it is that it is excited, or put into different states, by different external appearances and occurrences, as well as by different trains of thought ; and, therefore, all that we mean when we speak about the philosophy of the mind, is the states in which the mind may be, the circumstances that appear to produce those states, and the consequences that result from them.

## MATILDA.

Cannot we know what the mind is ? I am sure I have heard you say that it is spiritual, and that it never can die.

## DR. HERBERT.

And in so saying, Matilda, I spoke in perfect accordance with the revelation of holy writ, and the principles of that philosophy which we apply to the study of matter. When we say that the mind is spiritual, we rather say what it is not than what it is ; for we merely mean that it is something that cannot be perceived and examined in the same way as we perceive and examine matter—something which we cannot measure with a line, weigh in a balance, melt in a crucible, or decompose in a retort—something of which we constantly feel the operation, and are therefore compelled to believe the existence, but of which, further than the operation, we know, and can know, nothing. Yet, from this very impossibility of knowing its nature, there arises an argument for the immortality of its

duration—its freedom from dissolution and death—which is altogether irresistible. Death and dissolution are words of nearly the same import; and both of them can apply only to matter—to that which is made up of parts, and of parts that can be separated. The separation of those parts is, in many instances, the destruction of the individual substance, as a peculiar existence, or piece of matter; and the decomposition of a piece of coal, or a billet of timber, by burning it in the fire, is the destruction of that just as much as death is the destruction of a plant or an animal; the only difference is that dissolution destroys one kind of qualities, and death another; for both involve the idea of the disuniting of what was before united, and involve it very nearly in the same manner; death and dissolution being both effected by the same means, mechanical or chemical, only varying in the mode of their operation, and not always so much in that as the varieties of either of them differ from one another,—as, the same fire that decomposes the piece of coal, or the billet of wood, would occasion death to an animal or a plant. We cannot even imagine in the mind any thing like composition of parts, whether of integrant parts, or parts of the same kind, as the grains of sand in a stone, or constituent parts, or parts of different kinds, as the muriatic acid and soda in common salt; and therefore, it is just as impossible for us to imagine its decomposition or death.

## CHARLES.

Then are the minds of all the people who are collected together in the church-yard, still there ; and do they, without any of the labour to which we are subjected, see all that we see, and enjoy all that we enjoy ? If this be the case, it must be a delightful thing to be dead.

## DR. HERBERT.

Your question is not unnatural, for it is a question about which, in some form or other, a great deal of time and ingenuity have been wasted ; but still it is a question of ignorance ; and one of those that can be taken out of the way only by a proper use of intellectual philosophy. We know nothing about the mind, except in connection with the body, and our minds know nothing about the external world, except in that connection, and by means of the organs of sense ; therefore, it is utterly impossible that we can know anything about the place or the feelings of the mind in a separate state ; though as, in that state, it must be without those bodily organs by means of which we get our external impressions, it must either have no impression whatever of things external of itself, or be impressed by them in a way which it is impossible for us even to imagine. This may naturally bring us to a fifth practical use of the philosophy of mind ; and one which is of more importance than any that we have noticed.

## MARY.

Have the goodness to tell us that.

DR. HERBERT.

The study of intellectual philosophy prevents us from wasting our time and our ingenuity in idle fancies and speculations, that can lead to no knowledge, and be productive of no usefulness; and it prevents us from alarming ourselves with superstitious fears, of the reason or foundation of which we can know nothing.

Before men began to limit their inquiries and their belief to their knowledge, so much was spoken and written on the first of these subjects, that half the labour of the more rational had been expended in clearing it away. Before man knew himself as man, or matter as matter, he would need be wise in a world which was to him utterly unknown. Whether any piece of matter, as a stone or a tree, had an essence separable from its existence, and of what qualities this non-existence was possessed?—whether angels could pass from one point of space to another, as from the sun to the moon, in an instant, and without passing through all, or through any of the intermediate points?—whether they could see objects, and distinguish colours in the dark?—whether one, or an infinite number of them, could, at the same instant, occupy the same space—as standing on the point of a needle?—whether space would be perfectly empty

if there were nothing but angels in it?—whether God himself could exist in space that was merely imaginary, in the same manner as in space that was real?—whether he could create form without any substance, as a circle without any thing circular?—and whether he loved a non-existing great being, the existence of which was merely possible, better than an insignificant being, of which the existence was real? These, with a countless number of questions, equally unmeaning and impossible, engrossed the attention of mankind for many ages, and gave rise to disputes as keen as ever were waged about actual existences or real property.

EDWARD.

What fools they must have been.

DR. HERBERT.

Such fools as some of us have heard of, Edward. Do not you remember the ghost, which only a few years ago frightened all the folks in the village; and do you not remember, that you so far believed in it, as that you would not go to bed without a light for fear of it, till it was found to be only an idle young man, with a white sheet about him?

EDWARD.

But I was very young then, father.

DR. HERBERT.

So you was, and so was the world very young,

in knowledge, when those questions were agitated among philosophers ; but old Rachel was not very young, when she first propagated the story of the ghost, or when she persevered in believing it after the deception was found out. The want of better information, or rather the perversion of the powers which they possessed, was the cause of both ; and even those who firmly believed in the superstitions, and agitated the foolish questions, were often very clever upon other subjects.

## CHARLES.

Cardan, father, was a good mathematician ; and yet he is said to have starved himself to death, in order to prove the truth of astrology.

## DR. HERBERT.

So it is said, and by so doing he proved its falsehood, as he died of the starvation, and not of the prediction. It is not the mere possession of talents, but the proper use of them, that keeps people right, at any time, or under any circumstances. The vulgar do not believe all the superstitious nonsense that they are made to believe, for any want of natural abilities, but merely because they have never been taught the difference between what human beings can understand, and what they cannot, and are thus always confounding the one with the other.

## EDWARD.

But as ghosts are spirits, as angels are spirits, and as God himself is a spirit, will not the denial of the appearance of ghosts have a tendency to make people deny the existence of spirits, and doubt or deny that of God himself?

## DR. HERBERT.

And if the faith in the existence of Almighty God stand on no better a foundation than the error and misapplication of the human mind, would it not be surer to give it up, or rather would it not be an abandonment of the belief, in the opinion of more rational and thinking persons? If the existence of the Almighty were not found in his own works, and in his word, how could we receive it from the erroneous fancies and the idle fears of the most ignorant part of the human race? If wisdom failed in finding him out, how could we hope that folly would succeed in the grand inquiry? The God of nature and of revelation is the true God, known only in so far as it has been his pleasure to reveal himself in these; and that which is formed or fashioned by any other means, is a mere idol, a creation of the believer in it, and of less value than the most insignificant thing which it has pleased the Almighty to create. I have told you already—and the more that you think upon it, the more you will be convinced of its truth—that when we call any being a

spirit, in the sense in which the term is applied to the human mind, or to the Creator and Governor of the Universe, the name is not an index to qualities such as those of a piece of matter—it merely means something of which we, from what it has done, or is doing, cannot deny the existence, but of which the nature is altogether beyond the grasp of our powers, and quite unlike anything that we can examine by the senses.

MARY.

Then while the study of intellectual philosophy compels us to believe in the existence of a God, will it not also increase our knowledge of that Great Being?

DR. HERBERT.

Directly, and of itself, it will not; but by destroying the errors of our belief, it will send us to the only sources where the true knowledge is to be found—the works of nature and the volume of inspiration; and sending us there, it will be our tutor in our inquiry; and, if we profit rightly by it, it will not fail in directing us to the truth.

EDWARD.

You have said that the human mind is called a spirit, because it is something that we cannot know and understand in the same way as we understand matter, and that God is called a spirit for the same reason. Now is not that saying that

there is a great resemblance between the human mind and God, or that they are nearly, if not altogether, the same?

DR. HERBERT.

Do you know what sort of people are in the moon, or of what materials houses are constructed in Jupiter, Edward?

EDWARD.

No, indeed, I cannot know.

DR. HERBERT.

And would you, on that account, conclude that the people in the moon are nearly, if not altogether, the same with the houses in Jupiter?

EDWARD.

Oh no! father, certainly not—whatever they may be like, they cannot be the same.

DR. HERBERT.

In one respect, they are the same though. You are totally ignorant, not only of the nature, but of the existence of both, and you might call each of them by the name “unknown,” might you not?

CHARLES.

Yes, father, but we cannot call God, or the human mind, by the name “unknown;” else why should you direct us to adore the one and study the other? You never bade us reverence the inha-

habitants of the moon, or study the houses in Jupiter.

## DR. HERBERT.

That brings us both to the resemblance and the difference. In their essence—that is, in their own nature, and without reference to the manifestations of them that we may have in what they have done, or are doing—the Creator and the mind of man are as unknown, and, to our present perceptions, as unknowable, as the inhabitants of the moon or the houses in Jupiter. Thus far we apply the term “unknown” to them with perfect propriety ; and thus far it would be needless to bid you adore the one, or study the other ; but here the parallel and the equality stop.

## MARY.

I think, Sir, I can understand it : God, as seen in creation, and revealed in the bible, can be known and adored.

## DR. HERBERT.

You are right, Mary ; and just in the same manner may we know the mind, by attending to our own feelings and thoughts, and marking the impressions that are made upon ourselves or others by the changing circumstances in which we are placed.

From this study, if we pursue it in the right manner, and to the proper extent, we can hardly

fail to derive more exalted notions of the Creator, and more humble and correct ones of ourselves, than we could do by any other means. The Almighty created all things ; and, by the laws that he has implanted in his creatures, he can act through all the universe at every moment of time ; while we can create nothing, no not so much as a grain of sand ; neither can we alter, in the smallest tittle, any one of those laws by which the world is governed, and all the successions of its beauty and its grandeur kept up. Nay, even in the extent of our exertions, and what we consider the very depths of our wisdom, we find that the arm of the Everlasting is our strength ; and were it not for some provision that he has made to sustain us, we could not preserve our lives for a single moment.

## MATILDA.

Then the philosophy of the mind is very much the same with religion.

## DR. HERBERT.

One part of it is called by the name of natural theology, or natural religion. It is certainly the most sublime, and, I think, the most beautiful and useful of the whole. The greater the height to which we rise, the better do we discern the positions of things around us ; and when we survey our duties as rational beings, from that universe which connects us with our God as moral

and responsible, we can hardly fail in profiting by the association.

I will not, however, weary you with many more of the uses of the subject upon which we are soon to enter; but still there are a few that I can hardly pass over without some notice, however slight.

A knowledge of the human mind, of the various feelings, and of the means by which pleasant ones may be excited, and painful ones avoided, cannot fail in sweetening the intercourse of persons of the same class; by enabling us to avoid all means of giving pain and offence, as well as preventing us from taking offence where none is intended. Among those who are by their circumstances exempted from the wants that distress the poor, a very large portion of the uneasiness that is felt arises from misunderstandings, which could not so much as exist if the parties had that knowledge of the feelings of the human mind, and that discipline in the management of them, which it is one of the objects of intellectual philosophy to teach.

The same knowledge would teach us to conduct ourselves with more tenderness and humility—that is, with more true dignity—to those whom the accidents of life have placed in conditions inferior to our own. The consideration that all men, from the prince to the peasant, have precisely the same feelings, and stand in precisely the same relation to the Creator of the world, coupled with the knowledge that the grand dif-

ferences of men are mental, and that every one individual, if circumstances had drawn him out, would have shone as much as any other, can hardly fail to elevate as well as to equalize our affections for the whole rational family of our common Father.

Another thing. In whatever situation of life we may be called upon to perform our parts in society and discharge those duties which every member of a community owes to the other members, we shall find that a knowledge of the human mind will invariably enable us to perform our duty in a manner more satisfactory to ourselves, and more agreeable to others. Every part of society is full of idols, to which the ignorant pay their blind devotion; and wherever such are to be met with, the natural tendency of intellectual philosophy is to expose and explode them. But no where are those idols more abundant than in politics, where the springs of action are in the hands of a few, and the great body of the people are called upon to obey, and to act, without any reason being assigned in the official mandate, which is enforced by power, and not by persuasion. This mode of enforcement is unavoidable, as there could not be the means of reading every individual, in an empire containing many millions, a lecture upon the propriety of every command. But though this be unavoidable, it is attended with some evils. The majority of the people yield an idolatrous and not a rational obedience;

they respect the institution, whatever may happen to be the nature of it, for its mere existence, and not for any good that their understandings teach them to find in it. In consequence, they do not exercise that watchfulness at all times, and give that warning and advice which are essential to the best interests both of the rulers and the ruled ; and as their allegiance, while they pay it, is a matter of blind idolatry, and not of reason, they are at the mercy of every demagogue that may happen to proclaim an opposite line of conduct with sufficient boldness and noise. A more general diffusion of the knowledge of the human mind would remove these evils ; and while it would abridge the labour of legislators and governors, and render what remained more valuable, it would, at the same time, prevent the people from allowing their rights to be abridged in times of anarchy, and their minds from being influenced and carried away by demagogues in times of trouble.

The last circumstance that I shall mention to you, recommendatory of the study of this philosophy, is the security which the student has over it as a mental inheritance, which enjoyment cannot squander, and which others cannot deprive him of. Of all merely temporal possessions and enjoyments, it is the nature that they shall perish with the using ; and in proportion to the abundance of the use, the stock wears away : but it is the characteristic of this study to increase with the exercise ; and the more that you taste of

the pleasure of self-knowledge, the more will remain for you still to taste, and the keener will be your appetite. All mere worldly distinctions are at the mercy of many contingencies ; and he who in these matters takes what he considers as the most secure path, knows not of the pitfalls and hazards with which it may be beset. The smothered whisper of the menial of a man high in station, may occasion the instant disgrace of the most confidential and deserving in his service ; and the breaking of one regiment has sent to death, or exile, or both, the man who, if that regiment had stood firm, would have been at the very summit of empire. Even the study of the material world is contingent ; the organs of the senses may fail one by one, the sources of knowledge may be all shut up, and the glory of the heavens, and the beauty of the earth, may be to the sad remnant of humanity as if they were not ; but though every sense were extinguished, though the book of nature were closed, for ever closed, the mind could pursue its trains of inward reflection, and, amid the desolation, rise to higher views, as we find that contemplation can be better carried on in solitude than in a crowd, in the silence of the night than during the bustle and the activity of the day.

In the meantime, my children, farewell. Think of what we have been saying ; for remember, that what you may be told by me, or by any body else, verbally or from a book, is not knowledge

till you have made it your own, and by arranging it in your mind, understood the whole, not only as to what it may contain in itself, but as to the future knowledge to which it may lead. We shall soon meet again, and be assured that this subject will need all our attention.

## CONVERSATION II.

GENERAL DIVISIONS OF INTELLECTUAL PHILOSOPHY—METHOD OF PHILOSOPHICAL INQUIRY.

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DR. HERBERT.

WELL, I have no doubt that, since we had our last conversation, you have been thinking about this philosophy or knowledge of the mind—have any of you found out how we shall set about it?

MARY.

Perhaps you will have the kindness to tell us, and I am sure we will listen to you.

DR. HERBERT.

I have doubts if that would be the best way : in all cases of that kind, there is danger of our learning the words and not the meaning. Has any other of you any thing to propose ?

CHARLES.

We may get a book, and read it carefully ; and when we meet with any thing that we do not understand, we will come to you for an explanation.

DR. HERBERT.

That would not altogether do either, Charles : many people are, no doubt, obliged to instruct themselves by reading ; but if that about which you wanted to be informed were a material thing, say an elephant for instance, whether would you prefer seeing it or reading a description of it ?

EDWARD.

Of course we would prefer seeing the elephant ; at least, I am sure I would.

DR. HERBERT.

Then each of us has got a mind, and we have only to study that.

MATILDA.

But we cannot see it : you told us that we could not know any thing about the nature of it, further than how it acts.

DR. HERBERT.

And how much more than that could you know about the elephant ?

EDWARD.

A great deal, surely. An elephant has got a great body, thick clumsy legs, long hanging ears, small ugly eyes—

## MARY.

No, pretty eyes, Edward ; eyes that would make a person believe the beast were thinking.

## EDWARD.

“ Pretty, thinking eyes,” then, large tusks, not a very pretty mouth, and a trunk with which it could pick up a pin or fell an ox ; then it has got skin, and flesh, and blood, and brains, and a stomach.

## DR. HERBERT.

No doubt it has got all these ; and yet when you have mentioned them all, you have not told us what an elephant is ; you have only mentioned the names of some of the parts of its body ; and if we said that the mind is that which perceives, and remembers, and compares, and judges, and combines, and associates, and has feelings and emotions, such as courage, and pity, and joy, and anger, we should give just the same account of it as you have given of the elephant ; and yet we have no more knowledge of it than we had before, though we have the names which the people who use our language have agreed to give to some of its phenomena or appearances.

## CHARLES.

But we can see and feel all the parts of the elephant, or we can examine and analyze them as

substances, and we can make a picture of the animal itself.

DR. HERBERT.

That is all very true, Charles ; but, after all, it amounts to nothing more than saying that the elephant is a physical being, the whole of which, as well as the parts of which it is made up, is cognizable by the senses ; and that the mind is a being which is not physical, and of which, or its parts, the senses can take no cognizance.

MARY.

We can say something more about the elephant ; it is the most sagacious, and, when properly trained and treated, the most tractable of animals.

DR. HERBERT.

That is coming a little nearer to the right view of the matter, Mary ; the mind is still more sagacious and more tractable than the elephant. But how do you find out the ingenuity and tractability of the elephant ; is it from his size, his power, or any of those parts of him that have been named ?

EDWARD.

No ; for when I first saw the picture, with the clumsy body, the legs like the stumps of trees, the little eyes, and the nose like a great thick rope's end, more like a tail than a nose, I thought so

great and shapeless a thing could hardly have walked, instead of doing all that I have since been told and have read about him, and even what I saw myself of the one at the menagerie. The trunk answered all the purposes of a hand, or even of two hands, for I have seen him hold a large thing in the coil of it, and take up a little one with the thumb and finger at the end; and I shall never forget how he served a countryman who played him a trick. It was revenge, no doubt, but the man had no right to tease a beast that was shut up in a cage and made a show of. The folks were giving the elephant apples and bits of gingerbread, which he took with his trunk, and some gave him halfpence, with which he bought cakes from a basket-woman. Well, there was one man that held out a piece of gingerbread to the elephant, and just as he was to lay hold of it, the man hit the trunk a blow and went to another part of the booth. The elephant looked after him, but continued to be as civil to the rest of the people as ever. But when, a good while after, the man who had hit him came within his reach, he gave him a blow with the trunk, which knocked him to the ground, before any one knew what the elephant was going to do. Nobody could have found out that he would have done that, if they had not seen him do it.

DR. HERBERT.

Well, this case of the elephant may teach us

several things. In the first place, it may teach you, Edward, never to offer any insult or wrong, and never to make an exhibition of yourself to a stranger of whom you know nothing; and, in the second place, it points out where we must seek for knowledge of the mind. The form and appearance of the elephant gave you no idea whatever of his sagacity; and thus you see that sagacity or understanding, even in an animal, is not to be discovered by any investigation of its form, its size, or its composition as a material substance; but the human mind is far more sagacious than any elephant, and, therefore, we should not have been any better prepared for the knowledge of it, though we had known every thing about it as a material substance, than we are now, when we know, and can know, nothing whatever about it. We must arrive at the knowledge of that, just as we arrive at that of the sagacity of the elephant, or that of the disposition of any other animal, by observing it ourselves, or by reading or hearing whatever others have observed of it.

## CHARLES.

Then we may study intellectual philosophy from all the history and all the biography that is written?

## DR. HERBERT.

Certainly we may; and not only from these,

but from every invention and discovery, whether voice, or action, or performance, that have been achieved or performed by man. They are all the results or effects of the states of the mind. So that you see we have more abundant materials here, than in any other science : and we have our own minds in addition—the study of which is more important than all the rest.

## MARY.

But are we not in danger of getting confused in the very multitude of our means of information? If I am told the same story by two or three persons, I never understand it so clearly as when I am told it by one.

## DR. HERBERT.

That is not the fault of the story, but of the narrators, each of whom takes a different view of it ; and if you were to read all the accounts of the human mind that have been written by the authors that have treated of it, you would probably understand less of it than you do now that you have not read a word on the subject. In no one branch of study may it more truly be said, that they have “ darkened counsel by words without knowledge.”

## CHARLES.

But if so many men, and they, as you have said, men of ability, have gone wrong, how can we hope to be right, unless we first know all the blunders

that they have made, and so be prepared not to fall into any of them ?

DR. HERBERT.

We do not try to teach men to be good, by repeating to them the accounts of all the crimes that other men have committed, for we have experience that the knowledge of such matters tends more to tempt than to teach those who have weak minds ; we rather endeavour to impress upon them that it is their interest to be good, and to keep them as much in ignorance of vice as possible. Just so, in the philosophy of mind, it would not be the very wisest or safest course to begin by an enumeration of all the errors and mistakes, in the multiplicity of which the greater part of a lifetime would be wasted, and in the mazes of some of which we would be at least in great danger of being lost, if we did not take truth with us as our guide ?

EDWARD.

But if, as men, those men have been in error, how can we hope to be right ?

DR. HERBERT.

By a very easy means—by avoiding what has tended more than any thing to set the clever men of whom we are speaking wrong. Truth was too simple, too much within the power of the vulgar, to be worthy the consideration of philosophers. In all that portion of nature, whether physical, as

relating to the external world, or intellectual as relating to the mind, there is no mystery, and very few things about which the opinion or belief of one man can be different from that of another, unless in matters of mere feeling and taste; and thus it should seem, that the philosophers, in order to have something peculiarly their own, set about the making of mysteries.

CHARLES.

Respecting what then are we to inquire so as to be certain, or as nearly certain as possible, that we are in the way of the truth?

DR. HERBERT.

That will depend partly on the subjects of our inquiries, and partly on the mode in which those inquiries are carried on. The subject of our inquiry is the intellectual part of man, in its states or affections, as they are felt by himself or perceived by others, without any reference whatever to the abstract nature of that which is affected—that is, to it as a substance, or as being different from the affections themselves. We shall simplify the matter, however, if we divide it into parts, corresponding to the different states or relations in which man as a being may be considered to be found. Now, can any of you tell me the simplest state in which man can be placed?

MARY.

When he has nobody to please or offend, or think of, but only himself. Robinson Crusoe on the island.

DR. HERBERT.

Well, Robinson Crusoe on the island, and ere yet he had found his man Friday, or even the savages, had the same mind as if he had been placed in the most active situation in the most bustling city. He had not the opportunity of exercising his affections and feelings; but you have no doubt that he had the capacity of exercising them, and only wanted the proper objects in order to call them forth.

MARY.

No question that he had.

DR. HERBERT.

Then the first branch of the philosophy of man will be to consider him as an individual, merely as he is endowed with certain faculties, and capable of exercising them. This branch of the subject we may call the *physiology of the mind*, which simply means that it is the description or naming of the nature, that is, of the operations or phenomena, of the mind, as they are excited by external objects, or by the internal operations of the mind itself. To this branch of the subject it

will be necessary to attend first, as a right understanding of it is the foundation of all the others.

EDWARD.

But will not that be very difficult? I can understand how we are able to think about that which we have handled, or seen, or heard; but how can we think about that of which we have handled, or seen, or heard nothing?

DR. HERBERT.

In the meantime we shall content ourselves with believing that we do it; and even you must admit the fact, not only when you are awake, but when you are asleep. Do you not remember the dream that you had about the monster? Did you handle or see that, or did anybody tell you of it?

EDWARD.

No, but I thought I saw it; and if I had not awakened in the attempt to run from it, I am sure I should have thought that I felt it too.

DR. HERBERT.

Well, since you could not only think, and be terrified at the operation of your own mind, in a dream, but remember that dream after you awakened, will you not admit that other people may think, when they are awake, about that of which they have had no information, by touching, seeing, or hearing?

## EDWARD.

But I thought and believed that I actually saw the monster.

## DR. HERBERT.

So you told us ; and also that it came out of a thicket, with black leaves, and thorns half a foot long, in the midst of a country where you could see nothing else but sand ; and that the sun was shining very hot. Now all this, you know, could not be in any other way than in your mind ; for it was quite dark, and you were in bed, with neither black leaf, thorn, nor monster, to annoy you ; so that you yourself have experienced enough to shew you, that there are thoughts which the mind can entertain, and appearances that it believes at the time, and can remember and describe afterwards, of which it can have had no correct information from without. But we shall have occasion to refer to that afterwards, so let us at present enumerate the other parts of our subject. Is it necessary to study man in any other relation than as a single and solitary individual—as Crusoe on the island ?

## MATILDA.

Certainly, for men live in society ; and I dare say even Crusoe would not have been alone if he could have prevented it.

## DR. HERBERT.

Most likely not, and as we wish to live in

society, and the other members of that society have the very same nature as we have, we must ensure their good offices by giving them ours: we must respect their feelings and their property, in order that they may respect ours; and in that we must, even though there were no such thing as kindness or the desire of doing good in our nature, do them all manner of kind offices, upon the merely selfish principle of getting them to do us kind offices in return. This produces a new set of affections, or states of the mind, which could have no existence if man were merely an individual. The study of them forms a second branch of intellectual philosophy, to which the name of *ethics*, or the philosophy of morals, has been given. The word morals means merely our manners, or our conduct as it appears to others; but as others may be either pleased or displeased with that conduct, and as, living in society, it is our interest that they should be pleased with it, we, in common language, often use the word morals, as descriptive only of that conduct which is agreeable to others. Do we stand in any other relations than these?

## CHARLES.

Yes, we owe duties to the country of which we are inhabitants, and the public have a claim on us to assist in maintaining those laws and regulations by which our persons and our property are protected.

## DR. HERBERT.

And we owe many other duties to our country than these. It is our duty to promote, as far as we can, every thing that can increase the happiness and enjoyment of the people among whom we live ; and to lessen, as far as may be in our power, the errors, whether they arise from ignorance, injudicious laws and restrictions, or the tyranny of individuals, or anything else that retards their improvement. While we are doing these things, we are at the same time forwarding the cause of morality ; because there is nothing which tends so much to rouse and keep alive the anger, the revenge, and the other bad passions of men, as subjecting them to hardships and privations of which they cannot see the reason or admit the justice. This branch of the subject is usually called *politics*, or the philosophy of the many, or of the nation ; and though some are of opinion that it is chiefly valuable to statesmen who make laws, and rulers who put them in execution, yet that man must be very insignificant indeed who can perform his part in society without some knowledge of it.

## MATILDA.

You mentioned before that religion formed one of the branches of intellectual philosophy.

DR. HERBERT.

So it does, Matilda, and not of intellectual philosophy only, but of the whole philosophy of nature. There is not a star in the sky, a leaf in the grove, or an insect in the sunbeam, that does not, when contemplated in the spirit of true philosophy, reveal the existence, and proclaim the wisdom and the power, of its Maker. And, of course, as the human mind is the highest subject—the subject most nearly approaching to Godhead, though the difference be to us immeasurable in kind—which we meet with in the study of creation ; the existence of a Creator is more evidently perceived, and his attributes more clearly made out, when we are studying the human mind, than when we are studying any thing else. The religion which forms part of intellectual philosophy, or rather which arises from the contemplation of that science, at every step we take in it, is not our holy religion—the system of Christianity, as predicted in the scriptures of the Old Testament, and fulfilled in those of the New. It is not the religion of man as a sinner, standing in need of salvation through our blessed Lord ; neither is it exactly the religion of man as a moral creature, accountable in a future state for his conduct in this ; for of the mysteries of the Christian faith, or of the nature of a future state, either of reward or of punishment, we can know nothing by the light of the clearest philosophy, and we must, therefore,

have remained for ever ignorant of them, if it had not pleased God to reveal them directly in his word. The religion which arises in the progress of the philosophy of mind is the religion of adoration,—of a creature who, while he is finding indubitable proof of his own mental immortality, cannot withhold his admiration and his love from that Almighty Being, felt, yet uncomprehended, who reared the mighty fabric of the universe, and endowed man with powers capable of the contemplation of it. This is *natural religion*, or *natural theology*; the belief of which, to a well-informed and properly constituted mind, is as irresistible, and depends as little upon opinion or reasoning, as the belief of man in his own existence, or in that of the material world around him. To a certain extent, this religion accompanies the study of the whole of nature; and though there have been some who have professed to doubt or even to deny it, it seems doubtful if ever there was a man, not labouring under some mental delusion (for the delusions of mistaken philosophy are as wild and unaccountable as those of the maniac on his bed of straw), who seriously doubted that along with the creation there must be a Creator.

## CHARLES.

A subject so extensive, and at the same time so difficult, must occupy us a great while.

## DR. HERBERT.

Not so long as you imagine ; for if we can understand the great outline, our minds will have derived so much strength and dexterity from that, that we shall be able to prosecute the details by ourselves ; and ethics, politics, and natural religion, are little else than applications of the physiology of the mind.

## EDWARD.

I cannot see how we are to begin. When I am thinking myself, I have not one self to think, and another to observe how I think ; and as for other people, I cannot tell what they think, or even that they think at all, if they do not tell me, and then I cannot be sure that they tell me the truth.

## DR. HERBERT.

We must begin, in the same way that we begin the study of anything or object in nature, by examining its appearances, and classing those that have points of resemblance, so as to lessen as much as possible the number of words with which we have to burden our memory ; then, as to the supposed difficulty of our not having one self (or mind) to think, and another to observe how we think, we are just in the same condition with regard to the mind itself, as we are with regard to other things. When we see a rainbow, we have not one perception by which we discern it, and another

by which we decide whether it is a rainbow or not ; when we hear the sound of any particular instrument, as of an organ, we have not one perception by which we hear the sound, and another by which we decide that it is the sound of an organ ; when we touch a smooth surface, we have not one perception by which we know that we are touching a surface, and another by which we determine that that surface is smooth ; when we smell any perfume, as that of a rose, we have not one perception to tell us that we are smelling a perfume, and another to decide that it is the perfume of a rose ; and when we taste fruit, as a plum or a peach, we have not one perception by which we know that we are tasting, and another by which we find out that the substance tasted is a particular kind of fruit. In all these cases, and in every case in which we can have a knowledge of any one quality of a material substance, as discoverable by the senses, there is but one perception, that of the quality, and it is instantaneous and indivisible.

## EDWARD.

But I may perceive the taste, or any other quality, whatever it may be, and yet be ignorant of the thing of which it is a quality. The first time that I tasted a pine-apple, I knew that it was a nice taste ; but I did not know what taste it was, as I then knew nothing about a pine-apple.

DR. HERBERT.

But you found out afterwards that it was a pine-apple that you had tasted.

EDWARD.

Yes, after I was told, saw it growing, and heard all about it.

DR. HERBERT.

And if they had told you that the fruit was a mango, or a guava, or anything that you had not before seen and tasted, would you have been satisfied with that, or would you have still waited, ignorant of what it was, till some one told you it was a pine-apple?

EDWARD.

As I would have had no right to believe that they were imposing upon me, I should have taken whatever name they gave it.

CHARLES.

Then, as far as the taste was concerned, Edward did not get any information ; he only got a name for that which he knew before.

DR. HERBERT.

Yes ; and without showing you or telling you some other property of the fruit, which shall occasion a new sensation or impression, different

from that of taste, a name is all that anybody could give you. One of the greatest dangers that people run, in their attempts to acquire information, especially on subjects that are difficult, is imagining that they have gained knowledge when they have only got names. You remember the history in the beginning of the book of Genesis. What were the creatures sent to Adam for ?

MARY.

That he might give each of them a name ; and whatever he called each of them was its name.

DR. HERBERT.

And I suppose Adam would pay particular attention to what they were like, before he named them, in order that he might know them by their names when he met them again.

MATILDA.

If he had not done that, the names would have been of no use.

EDWARD.

But the names would have been of no use to Adam if he had remained alone, as he was at the time when the names were given, because he must have known a lion from a bear, just as well before he gave them their names as after ; and it would have made no difference though he had at fir

called the lion a bear, and the bear a lion ; though after there were more people, the names would enable them to communicate to each other anything more than they might have found out about the animals ; and after the names had been first applied, it would have been improper to change them, because it would have given everybody the trouble of learning them a second time.

DR. HERBERT.

Then do you not perceive that names (or, which is the same thing, language) are of no use in procuring original information about anything that exists, though they enable one person to communicate what he knows to others ? Before we can add any fact to the stock of information, we must observe some new quality or appearance.

EDWARD.

When I say that “book” is a “substantive noun,” do I not give some kind of explanation of it ?

DR. HERBERT.

You give it the name that grammarians give it in their arranging of words into classes : and, in the same manner, if you were to call your pineapple a *bromelia*, you would give it the name which botanists use in their classification ; but, instead of communicating any information, you would make the matter more dark and vague, by

the use of a name of a much more extensive signification, which would be applicable to many substances, some of them very unlike that which you meant. You know the meaning of the word "phenomenon," do you not?

CHARLES.

Yes ; it is the general name for an appearance—any new subject, or any new aspect of a subject, that is apparent to the sight.

DR. HERBERT.

You know what an eclipse of the sun is ?

EDWARD.

It is the obscuration of the whole or a part of the disc or face of the sun, occasioned by the moon coming between the sun and the inhabitants of the place where the eclipse is visible. It can only happen at the time of a new moon, and only then when the moon is within a certain distance of the node or point in which the plane of her orbit intersects that of the earth.

DR. HERBERT.

And would you think that you had sufficiently explained to an ignorant person what an eclipse of the sun was, if you told him that it was a phenomenon ?

EDWARD.

Certainly not.

DR. HERBERT.

There have been those, however, who have been satisfied to give and also to receive such an explanation, without any blame on the part of the latter, as the ignorant are to be pitied and not blamed for any imposture that is imposed upon them. I shall mention a case to you, on the truth of which you can depend ; and I mention it to you, not so much for the sake of telling you a story (though, as I shall have to make better use of you by and by, you must grant that, by way of relaxation), as of fixing in your minds the necessity of not being imposed upon by a mere name when you are in search of information.

In a country town, (I think it was in Scotland, between the estuaries of the Forth and Tay,) where the people did not use to be very remarkable for their wisdom, there was a teacher of Latin, who was a man of some note in his way ; but as his profession was words, and as he devoted himself closely to it, he had a name more at hand than an explanation. Owing to cloudy weather, or some other cause, there had not been an eclipse of the sun visible for some time, and the people had either never had any knowledge of one, or they had forgotten it all. One fine sum-

mer morning, when the people were crowded in the market-place, some one looked up at the sun, and observed a notch in its eastern limb, as if a piece had been broken out. One pointed it out to another, till, in brief space, the marketing was at a stand, and all the folks were gazing at the sun. The notch increased, till the dark portion approached the centre of the disc, and the light became fainter, and was tinged with red. They were alarmed; some spoke of one dreadful catastrophe, and some of another; but the general belief was, that the end of the world was come. They began to run about in the greatest consternation, as none could inform the rest what was the matter. At last the schoolmaster came from his class-room, moving with great solemnity, and proceeded through the crowd. He found them all in consternation and uproar. "What is the matter," said he, "are the people mad?" One seized him by the arm, and pointed to the sun. "Nonsense," said the schoolmaster, "it is a phenomenon; you need not be in the least alarmed, for you may rely upon my word that it is nothing but a phenomenon." With that, the expounder of nature went his way; and the folk renewed their avocations, consoling one another, and quite satisfied that it was—*nothing but a phenomenon*.

EDWARD.

What a set of stupids they must have been.

## DR. HERBERT.

There was no fault in them, Edward. You would have acted in the same way yourself, if any person, for whose opinion you had respect, had given you a word of which you did not know the meaning, as the name of an appearance which you did not understand.

## MATILDA.

But, father, we could not do without words ; there are so many things which it is desirable to know, that we could not have any knowledge of the hundredth part of them, if they were not described to us in words.

## DR. HERBERT.

So far from wishing to undervalue language in your estimation, I am anxious only to impress you with a proper sense of its value. If it were not for language, our information would be limited indeed. Beyond the limits of our personal experience, we should know nothing of the present, which is the theatre of our acting and enjoying; we should know very little of the past, which is the school of our instruction ; and the little that we should know of the latter, would be vague and uncertain, as we could obtain it only by older persons pointing to things present by signs. Nay, even without written language our information would be very vague, because facts could be handed down only

by tradition ; and as it is exceedingly difficult for two persons, even though they have both been witnesses of it, to give the same account of the same occurrence, you can easily perceive that it must be next to impossible for a tradition to come down through a succession of ages, without having a great deal of fancy and falsehood mixed with it, even although there were on the part of the narrators not the least desire to alter that which had been communicated to them. But while we thus set upon language its proper value (and, next to thought itself, without which there could be no language, it is the best gift of our bountiful Creator), we must be careful not to use it in the place of that, the place of which it cannot supply. "Words," says a very acute philosopher, "are the counters of wise men, but they are the *money* of fools." Now, when we wish to have the coin of information, we must be very careful that we neither ourselves pay, nor suffer ourselves to be paid, in counters.

EDWARD.

Cannot we get the explanations of words in the dictionary ?

DR. HERBERT.

Not with the precision, or to the extent, necessary for the purposes of science, especially of such a science as that of the human mind. What the dictionary gives us, is but very little different from

that which I am cautioning you against. Instead of an explanation—an enumeration of the qualities of the object of which the word is the general name—it gives us generally what is called a synonym, or word having the same meaning; but as there could not be two words of exactly the same meaning, without one of them being useless, the dictionary puts us wrong, in as far as the explaining word differs from the word which it purports to explain; and in as far as they agree, we get no additional information, unless the thing used in explanation be better known to us in its nature and appearances than the thing that it is meant to explain.

CHARLES.

Then how can we get any information at all?

DR. HERBERT.

There is nothing more easy, Charles, or more pleasant, if we would go the right way about it. We have powers of observation and reflection, and the world is around us as a subject upon which to exercise them—a subject which the longest and most studious life cannot exhaust. Indeed we are in danger of despising the knowledge of things, which is the only true knowledge, just because it is simple and open to everybody; and we follow the false knowledge of words, because there is a depth and mystery about it, that we are unable to fathom and understand.

MARY.

I suppose Pope alludes to that when he says—

“ True no-meaning puzzles more than wit.”

DR. HERBERT.

Precisely so. Where there is nothing to be found, we may search long enough before we find anything; and this is the cause of all the errors and disputes about which men have spoken and written so much, upon all subjects, and upon none more than that of the mind. On every point there is but one truth; but there is all the world beside in which to plant falsehood: and of everything there is but one knowledge, though there be many ways of being ignorant of it.

EDWARD.

But the difficulty is, to find the one among the many.

DR. HERBERT.

There is no difficulty in the matter. The right is always much more easily found than the wrong, and the road to it is always the shortest.

EDWARD.

Then a right line is the shortest distance between two points in philosophy, as well as in geometry.

## DR. HERBERT.

You are correct ; and that is the very property of that which they stand for, which makes us apply *right* and *wrong* in the sense we do. *Right* is *straight*—the shortest distance to whatever we may be in pursuit of ; and *wrong*, wrenched or twisted, is any longer way to it, and always the longer the more that it is wrong. You can now tell me, I dare say, how we are to obtain a knowledge of anything ?

## MARY.

We must go straight to that thing itself.

## DR. HERBERT.

That is exactly the way, and it is the only way—simple enough, we think, after we have found it ; and yet it is not more than two hundred years since philosophers would take it, on any subject ; nor nearly so much since they would take it in the philosophy of the mind ; though those upon whom they bestowed the names of the illiterate, the ignorant, and the vulgar, had taken it from the beginning, in the common business of life ; and they had the example of the beasts to teach them.

## EDWARD.

It may then be said, that while they who thought themselves wise were playing with counters, those

whom they called fools were circulating the coin.

DR. HERBERT.

Well, let us take any substance—we need not name it, as any one will do—and consider what we can know about it.

CHARLES.

We can know what it is, and what is the use of it. That is all that I can find out.

EDWARD.

We can know where it came from.

DR. HERBERT.

That is no part of the knowledge of the thing itself; are you different when you come out of bed, and out of the garden?

EDWARD.

I feel differently.

DR. HERBERT.

That is another matter, and belongs not to the general knowledge of you, as Edward Herbert, which would still be a matter that could be inquired into, though you had never been in a bed or a garden.

## MATILDA.

But we could know its history.

## DR. HERBERT.

That is only an enumeration of its uses ; and your brother's statement, though not given in the usual language of philosophers, is yet all that sound philosophy requires. If we knew what everything was, and what were the uses of it, we should have all the information, not only that we could desire, but that we could possibly obtain ; and, therefore, all our inquiries, whether relative to external nature or to the mind, must be confined to the two branches, the proper conducting of which will, therefore, comprise the whole of our philosophy.

## EDWARD.

But will that apply to events that happen as well as to things that are—to the felling of a tree, or to its being broken by the wind (as the great mulberry-tree was), as well as to the tree itself ?

## DR. HERBERT.

Yes, with this difference only, that events happen—can only be observed and known—from the things by and to which they happen ; while things that exist could be known in their existence and their uses, though nothing but themselves existed. There is one other short question, to which I should like to obtain an answer, before I proceed to

explain to you the language into which philosophers put the inquiry about which we have been speaking, and the manner of conducting that inquiry. The question which I wish you to answer, and to which I beg you will pay particular attention is this: can there be any new use of anything without some change in the thing itself, in its owner or possessor, or in its place among other things?

MATILDA.

That is a very simple question, father; the cook cannot use a saucepan, or the gardener a spade, without moving it from one place to another; and I cannot use so much as a needle or a pin, without taking it out of the cushion with my fingers, and putting it in something else.

EDWARD.

And many things are changed altogether when they are used; as coals, when used for the fire, and food when we eat it.

CHARLES.

Yes; and things which are not immediately changed or dissolved are always worn by use, as clothes, pens, books, and every thing that can be used.

DR. HERBERT.

I agree with you that the question is a very

simple one—so simple that we seldom think of putting it, and never need to dictate an answer, even to the most ignorant person to whom it can be put ; and yet want of attention to this simple question has been the cause of a great deal of error.

The uses of things are the *changes* of things—though we, in our ordinary language, apply the word “use” to such changes or applications of things as are gratifying to our perceptions or feelings ; and thus it will be more general, and, therefore, more philosophical, to say that the whole of our inquiries after knowledge must be directed, either to things, or to the changes of things.

EDWARD.

But are not these, in many cases, the same ? We may know the use, or change, from the thing itself. If I see a sharp knife, I do not need any body to tell me that I can cut a stick with it.

DR. HERBERT.

If I were to place before you two objects, neither of which you had either seen or heard of, could you tell me that the one could, or could not, cut the other ? and if they did, which one would be cut, and which one would be the cutter ?

EDWARD.

Yes, if—

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DR. HERBERT.

We must have no “if,” Edward ; the whole knowledge of the cutting is confined to a single point ; and thus, if we were to grant you any thing, we should grant you all. But let us put the question in a more general form ; could you know that of which you were at the same time altogether ignorant ?

EDWARD.

I do not think you can wish me to answer that —I could not possibly know, and not know, the very same thing at the same time.

DR. HERBERT.

I did not wish you to answer me ; I only wished to put the matter in so clear a light that you could have no doubt of its truth, and to impress upon you the great importance of thinking rightly, and making a right use of language, in all philosophical inquiries, and more especially in those parts of them that appear so simple, that we are not generally in the habit of thinking about them at all.

CHARLES.

But we have not yet made any progress in the study of intellectual philosophy. In the other sciences, we came to definitions, and axioms, and

propositions, almost the first evening ; and here, nearly a second one is gone.

DR. HERBERT.

We shall not do our work the worse, or be the longer in doing it, for knowing what it is before we begin. We have found out where we must seek, and what we must seek, and we are in progress with how we are to seek it ; and I do not think we should have saved any time by the omission of any of these.

MARY.

Yes, we are to seek the appearances of things in the things themselves.

DR. HERBERT.

That is it precisely. The phenomena, or appearances, of things, are all that we can know.

CHARLES.

In books, as well as in conversation, I have often read or heard of the IDEA of a thing, and I never could exactly know what that is.

DR. HERBERT.

That is a word which has produced many errors, and given rise to many disputes. The old opinion, when philosophers would take the crooked road instead of the straight one, was, that besides the mind, which perceived or thought, and the

thing or event which it perceived or thought about, there was in every case a mysterious image or impression, like the figure that a seal makes upon wax, which is neither the wax nor the seal.

MARY.

But the impression is only the state of the wax, after the seal has been impressed on it, the wax being at the time in a fit state for receiving the impression.

DR. HERBERT.

Just so is an idea the state of the mind, produced by any seal of knowledge that may be impressed upon it, the mind being then in a fit state for receiving the impression. An idea is neither more nor less than the knowledge that we have of any thing. A correct idea means correct knowledge; an imperfect idea, knowledge only to a certain extent; and a vague idea, knowledge, of the accuracy of which we are not altogether convinced. This is rather an interpolation; but it will do good rather than harm. Idea is a short word; it is in general use: and if we always bear in mind that it merely means knowledge, we can use it without impropriety. Where were we when the idea came to visit us? I hope it will be no stranger.

MARY.

“ The phenomena, or appearances, of things are all that we can know.”

## DR. HERBERT.

Yes. But these phenomena give rise to two modes of inquiry, which are different in the case of the material universe, and more so in that of the mind,—or, rather, as applied to that, the one of them is wanting, or, is at least only an inference from the other. We can know the material universe, or any part of it, in these two ways—

1. As it exists in space only.
2. As it exists in space, and during some portion or succession of time.

In each of these respects, the knowledge that we obtain may be different. As it exists in space, we may speak of a body, as a whole ; mention it as one substance ; and then, its form, its colour, its weight, its consistency, and those other properties of it which we are accustomed to call mechanical, and which are immediately perceptible by the senses, without any reference to decomposition, will be the greater part of the knowledge that we can acquire. This is the common notion that mankind have of material substances, as distinguished from each other. Thus, a countryman distinguishes a flint from other stones, by its colour, its consistency, and the peculiar form of the fracture when broken.

But we may also regard the individual substance, not as one uniform mass, but as a compound made up of certain parts, differing in their natures

from each other, and yet existing in the smallest portion of the substance that we can recognize by the senses. Thus, a piece of coloured glass, which to the senses appears not only of uniform consistency, but one substance, or is, as we say, homogeneous, is really made up of these substances, blended together, viz.—silicious earth, or flint, an alkali, and a metallic oxide, the two former composing the body or substance of the glass, and the last one giving it the colour.

CHARLES.

Before the process of chemical analysis was brought to perfection, many substances were considered as simple, which have been found to be compounded of parts. The ancients had no idea that air and water were compounds; and they would have been astonished if they had been told that the light of the sun contained, besides its heating and chemical parts, and separable from them, all the colours that can be imagined to exist, and that it is the pencil with which all nature is painted.

DR. HERBERT.

Those discoveries are so many further proofs of the advantages of examining things themselves, and not amusing ourselves with verbal speculations about them. While the ancients were ignorant of the composition of water and atmospheric air, they were engaged in speculating, how all the dif-

ferent substances were made up of the four elements.

EDWARD.

It is singular that they did not find out the colours in light ; there were rainbows then as well as now, and as they had glass and crystal, the angular pieces of these must have reflected different colours when they were differently exposed to the light.

DR. HERBERT.

And though apples must have fallen to the ground in the days of Ptolemy as well as in those of Newton, that fact did not lead to the discovery of the law of gravitation till the time of the latter. The truth is, that there is no property of matter or of mind, and no law of the material universe, or of thought, that was not in itself as open to the knowledge of man in the early ages of the world as it is now. The most profound inquirer that ever lived, never invented one quality of matter, or one law of the succession of phenomena.

CHARLES.

Why is it, then, that the moderns have made so many, and such rapid advances, in the knowledge of matter ?

DR. HERBERT.

By limiting invention and discovery to their

proper objects ; inventing apparatus and methods of making discoveries ; and observing the succession of events in nature, and the results of experiments :—in consenting to be students before they become teachers.

EDWARD.

Then the knowledge that we can acquire of substances, as they exist in space, is made up of what we were on a former occasion taught to call their mechanical and their chemical properties ?

CHARLES.

And the mechanical properties are those which belong to the substance in itself as a whole, and as not altered or decomposed by other substances, nor as altering or decomposing them ?

DR. HERBERT.

The line of distinction cannot be drawn with precision ; but in the average of cases, you are right. As in glass, the smoothness, the brittleness, the transparency, the hardness, the power of reflecting light, and every thing else that we can find out about it, without in any way altering its appearance and nature, are mechanical properties ; and its being composed of certain ingredients, these being separated by the action of fluoric acid ; and its melting at a certain degree of heat, and crystallizing internally, so as to be very brittle when rapidly cooled, are chemical properties.

## MATILDA.

The mechanical properties of an oak enable us to make a house of it ; and the chemical properties enable us to make a bonfire : but the oak must grow before we can do either. We must make an oak of an acorn ;—whether is that mechanical or chemical ?

## DR. HERBERT.

In the sense in which we commonly use the words, it is neither ; but as it consists of a change in the substances which the oak selects as food, from their own nature to the nature of oak, it is more allied to chemistry.

## EDWARD.

But I can easily find out that, a beam of oak can support a weight, or a billet of oak burn in a fire ; but I should never be able to discover that an acorn—a little thing in a shell—could become like the great tree on the lawn.

## DR. HERBERT.

And yet it has been discovered, Edward ; and the discovery was, no doubt, made before the first professional philosopher was born. But how could you find out that a beam of oak would support a weight, or a billet of oak burn in the fire ?

EDWARD.

Other woods bear weight, and can be burned.

DR. HERBERT.

And do not other seeds and nuts besides acorns grow up into trees?

MARY.

I think if we had not seen it, or been told of it by somebody, we could not have known more of the one than of the other.

DR. HERBERT.

You are right, Mary, and the party who told us must either have observed the fact, or been told of it; so that, let the information be hacknied through as many persons as we choose, we must come to the observer at last; and, therefore, the shortest way is to go to him at once.

CHARLES.

The beam supporting the weight, the fire burning the billet, and the acorn producing the oak, are not the substances, as existing in space merely, but as existing in time.

DR. HERBERT.

Certainly. These and all such cases are the second branch of our knowledge; and when we have exhausted both, we can know no more. The nature and composition of all the substances that

exist at any one instant of time, considering each in itself, and without reference to any of the others ; and the knowledge of all the changes in which they or any part of them have been engaged; form all that we can know. Thus, when we have examined all the mechanical, and chemical, and vegetative properties of the acorn; and when we have traced all the matter of which it is made up through all the changes and combinations into which it has entered (and you have seen that we have no means of getting at any, even the simplest, of them, but by observing it), there is nothing further that we can find out respecting it.

EDWARD.

Cannot we find out the cause why the acorn grows, why the beam is strong, or the billet inflammable?

DR. HERBERT.

That is what mankind lost so much time in seeking, and what they always failed in finding. They failed, simply because there was nothing to find. As far as we can observe the qualities of substances, as they exist in themselves, or the changes that they undergo, when we change their situations, or the circumstances in which they are placed, we are in the path of knowledge ; but the moment that we attempt anything beyond that, we seek we know not what, and of course we cannot know either where or how to seek it. If I

were to order any of you to go in search of the thing which none of us knew, or knew it were in existence, where would you go to look for it ?

CHARLES.

None of us could tell.

DR. HERBERT.

All that we *can* observe in the universe, are, substances by their properties, and phenomena form the substances among which they appear ; and, therefore, every inquiry that we attempted to make beyond that, would be an inquiry without knowing what we were inquiring about. We know the external world, because we have observed it, and just as far as we have observed it ; we know our own minds, just because we think and remember, and just as far as we think and remember ; and we know, in a natural and philosophical point of view, the Great Creator of the Universe, just as we feel traces of him in our own minds, or discover them in the other works of creation, and our natural knowledge of him extends no further than our observation. This (and I wish you to reflect upon it, and convince yourselves of the truth of it) is all that we can know. But we have no reason to lament that it is too limited ; for though the world be nearly six thousand years old, and though there were always some means, however limited and imperfect, by which the people of every age could avail them-

selves of some of the knowledge of the ages before them, yet this knowledge is, to the great majority, still exceedingly limited, while the progress of the best informed is not much to boast of.

## CHARLES.

But we have often been told, that the knowledge of one thing leads to that of another, as the discovery of the mercury standing only to a certain height in the glass tube, which was made by Toricelli, led Pascal to discover the weight of the atmosphere, and the use of the barometer in pointing out alterations of that, either as occasioned by changes in its own composition, or differences of altitude above the level of the earth. Now if the causes had not been known, how could that have been?

## DR. HERBERT.

Stretch out that part of your arm which is without the sleeve of your coat, and which is divided into five portions at the extremity, and tell me what you call it.

## CHARLES.

A hand.

## EDWARD.

And mine is a hand too.

## MATILDA

And so is mine.

## MARY.

And mine, and your's, and every body's

## DR. HERBERT

And why do we call them all hands? Is it from any cause different from our knowledge of the hands themselves?

## EDWARD.

We call them hands because they are like each other, only some larger and some smaller; and because they can all do the same things

## DR. HERBERT.

And is this all the cause?

## CHARLES.

Yes; and there is no use for any more, we know them well enough from that.

## DR. HERBERT.

And how do you know them?

## MARY.

We know that they have the shape and the colour of hands, by looking at them.

MATILDA.

And that they are living hands, by the fingers stretching and bending, without being stretched or bent.

EDWARD.

And that they are strong hands, if we see them lifting a great stick, or striking a smart blow.

DR. HERBERT.

Now let me ask you, if in any of these, or in any thing else that you ever saw done by a hand, there was any thing farther to be known than the hand, and what the hand did ?

MATILDA.

When I write, there is the pen, the ink, and the paper.

MARY.

But if there were not the hand, or something that could supply the place of the hand (as we saw in the writing automaton), there would be no writing, which is the event to which you allude.

DR. HERBERT

And you never mistake any of these hands for a foot.

EDWARD.

No ; they are not like each other, and they do not the same things.

DR. HERBERT.

If you found a foot exactly like a hand, and doing exactly the same things as a hand, what would you think ?

MATILDA.

That it were a hand of course, and not a foot at all.

DR. HERBERT.

Then, in this very simple and familiar matter, we have a complete explanation of the way in which the knowledge of individual things, and individual occurrences, enables us to know other things and other occurrences. When things are like in all that we know about them, we infer, and can not help inferring, that they are like, on the whole, as things ; and we do it for the most simple and obvious reason. We know all about them, and we know no difference. In like manner, we consider two events as being, in whole, like or the same, when we know all the circumstances that accompany or are connected with them, and when these circumstances, singly, and in their order, are precisely the

same. Likeness, or the absence of likeness, is all that we can know, independently of the information that we get by observing. It is very little, no doubt; but it is sufficient for the purpose: and when we attempt to gain more, we uniformly fail.

If you met with a flower which had all the properties by which you distinguish a rose from other flowers, what would you call it?

MARY.

Whatever I might call it, it would certainly be a rose.

DR. HERBERT.

And if you were told that all the qualities by which you distinguish the rose, were existing at any one place, without any other quality along with them,—if you were told this by an authority that had never deceived you, what would you believe to be there, or expect to find there if you went to examine it?

MATILDA.

A rose, of course, and nothing but a rose.

DR. HERBERT.

In like manner, if you knew all the circumstances under which an event had happened, and if those circumstances happened again in the very same order, what would be the consequence?

EDWARD.

The very same event would happen again.

DR. HERBERT.

And if the circumstances were not the same?

CHARLES.

The event would be different.

DR. HERBERT.

What would be the *cause* of the difference?

CHARLES.

The difference of the circumstances. I know of nothing else.

DR. HERBERT.

Neither do I, Charles; nor does any body know of any other cause: and that is the reason why it is idle to seek for any other. But if all the circumstances which you had formerly observed in an event should happen again, and yet the event itself not take place, what would you infer?

CHARLES.

That in the former case there had been some circumstances which had escaped my observation, and which had been omitted in the latter case; or that in the latter case some new circumstance

had been introduced, which had in like manner escaped my observation.

DR. HERBERT.

And how would you go about to supply your want of information?

CHARLES.

By observing the circumstances more carefully, when the event occurred again, if it were an occurrence in nature; or repeating the experiment with more care, and varying the circumstances, if it were any thing that I could perform.

DR. HERBERT.

And what would you have to guide you in the varying of the circumstances?

CHARLES.

I would select those that I thought the most likely to succeed, and I would take those which I had observed to be connected with events as like the event in view as possible.

DR. HERBERT.

Then you perceive that all that we can know about the material universe, must be the result of observation; and that by mere thinking we cannot know, though we may find out how to use that which we do know, or how to observe what happens, or anticipate events by experiment,

in such a manner as to enable us to get more knowledge by future observation. This constitutes the whole philosophy of nature; and all that is beyond or different from this, other than direct revelation by our Creator, established upon evidence which we cannot controvert, is idleness and error. But as the objects of the material world have no reference to our future state as moral and accountable beings, no revelation of the Almighty was necessary respecting them, except that which they themselves proclaim in their nature and changes.

But the philosophy of our own minds—the study and knowledge of the thinking principle within us—while it differs less in its nature from the philosophy of the external world than some have endeavoured to persuade us, is perfectly analogous to that philosophy, in the mode by which we must study it. In both cases, we must observe the phenomena in themselves, as existing momentarily, or as they occur in trains of succession; and the inferences that we draw from reflecting on them follow the same law. If the mind be similarly affected at two different times, we call the state of it—the perception, the recollection, the reflection, the feeling, the emotion, the passion, or whatever name we give it—the same; and where one state of mind, in all the cases in which we have had any perception of it, has been constantly followed by another state, we cannot help inferring that, upon other and

future occasions, the former of those states will be followed by the latter. When in either case the perfect sameness of the circumstances is established, the sameness of the result is a matter which we cannot deny or doubt, without doing the same violence to the very constitution of our minds, as if we doubted that two and two, which made four upon all known occasions of adding them, would make the same upon every other like occasion.

## EDWARD.

- But two and two added together, do not make four upon every occasion. In Algebra  $+ 2$  and  $- 2$  added together, make not 4 but 0.

## DR. HERBERT.

The circumstances are not the same, Edward, and the seeming discrepancy here is merely a fault in the language—one of those faults of which there have been more in treating of the mind, than in any other branch of knowledge. The  $- 2$  is not  $2$  at all; it is an abridged expression for the operation of taking two away.

## CHARLES.

In studying the external world, we have the objects themselves, and our own thoughts about them: whereas, in our own minds, we have only the thoughts.

DR. HERBERT.

The cases are still very similar; for further than we can observe their phenomena, we can know nothing of either. One set of philosophers denied their own existence, because they had no knowledge of it, beyond their own perception of it as existence: and another denied the existence of the external world, for the very same reason. Both proved the existence of that which they denied by the very fact of denying it; and both erred in seeking for that knowledge of which they were already in possession—in a quarter where there was only one truth to be discovered.

EDWARD.

What was that?

DR. HERBERT.

The knowledge that they were doing that which all of us are but too apt to do—neglecting that which is real and useful, for the sake of that which is not imaginary merely, but impossible.

CHARLES.

Just as some mechanics, instead of applying their ingenuity to the improvement, or the invention of useful machines, have wasted it upon perpetual motions—things in their very nature impossible, and known to be so to the merest novice in the science of mechanics.

DR. HERBERT.

Precisely so, Charles. The nature of the mind, as exhibited or discoverable in any thing but the different states of the mind—the only thing that we can know about it—is the perpetual motion of the mind; and may be discovered when they have found out one in mechanics, but certainly not till then.

EDWARD.

Then the fools and the philosophers have sometimes resembled each other, a good deal more than the latter would be willing to allow?

MARY.

What makes you think so, Edward?

EDWARD.

The fools have peopled the external world with goblins, and spectres, and other objects of horror; and the philosophers appear to have peopled the world of philosophy with difficulties that had just as little real existence.

DR. HERBERT.

Your observation is not altogether without foundation; but our business must be to take warning rather than to censure: we are never in greater danger of erring ourselves, than when we exult over the errors of others.

Our next conversation will be on the succession of phenomena, or events, in which we shall have to consider what people mean when they make use of the word "power"—a word in very frequent use, and therefore it may be as well that you think of the meaning of that word before we meet.

## CONVERSATION III.

POWER—FORCE—THE SUCCESSION OF EVENTS—  
CAUSE AND EFFECT.

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DR. HERBERT.

HAVE you been thinking on the meaning of the word “power,” as I requested you? and if so, have you been able to find out any thing to which it is applied as a name?

EDWARD.

Yes. A great number of things: the mechanical powers—the lever, the wheel and axle, the pulley, the wedge, the inclined plane, and the screw—the power of the wind, and of water, as in driving mills—the power of horses, in drawing carriages—the power of men, in doing work, or understanding any subject—the power of steam,—the powers of Europe—almost every thing, of any use, that we can think of.

DR. HERBERT.

The more ample you make your enumeration the better ; for the error in language (and it is one which may lead to many errors in thought) is common to them all ; but let us take one of them : the power of a horse, for instance—what do you mean by that ?

CHARLES.

The ability that he has to draw anything along, as a cart, a plough, a roller, or a carriage.

DR. HERBERT.

Well, now, suppose yourselves perfectly ignorant of the motion of any of these implements, or the power, as you call it, of animals to draw them, or suppose yourselves ignorant of the motions of animals and carriages altogether, what would have led you to know or conclude that the horse would draw the cart, and not the cart the horse ?

MARY.

If we had been *so* ignorant, I do not think we could even have guessed at it.

DR. HERBERT.

And we are *not* “*so* ignorant,” just because we have observed for ourselves, or because somebody else has observed for us, and communicated their information to us. The power of the horse is a

simple and every day matter, and something similar to those powers which we ourselves begin to display long before we are able to think about the nature of them ; but another of your powers, the power of steam, now does the work of a million of horses ; and yet it has not been known to be a power for much more than a century. In no one instance can you find that the power which you ascribe to the horse or the steam, or whatever else it may be, is anything apart from the horse, the steam, or the other thing which we say exerts the power.

## CHARLES.

The power of a horse to draw a carriage cannot be the same as the horse ; for when in the field, the horse has quite a different power, the power of galloping about to any part of it that he chooses.

## DR. HERBERT.

Still that which we call power is only the thing which we say exerts the power, placed under certain circumstances. When we are ignorant of the thing and the circumstances, we can know nothing about the power ; and the information that we get about it comes from the observation of the appearances, and from nothing else. The word “power” is precisely of the same kind—a short name for a succession of appearances ; and it means nothing more than the appearances themselves, or rather our perception of them, as taking place in

succession, which is all that we know, and all that we can know, about them.

MARY.

If we do not know the powers of things, and especially if they have, as you say, no powers to be discovered, then how are we to know the use of any thing? Why should I sit down to the harp or the piano-forte, if I did not know that the instrument had the power of producing musical sounds?

DR. HERBERT.

By experience—by hearing others play, and attempting it yourself, just as you do now. The information is wholly in the appearances, and our hope of information about the power, apart from these, is like that of the countryman at the fair. He was attracted by a signboard on a booth, painted with these words, “The sagacious elephant, the wonder of nature.” He paid his pence, and entered, in hopes of a double gratification to his sight. The elephant was shewn off, and the close of the exhibition announced. The countryman was sadly disappointed, and complained of the exhibitor for imposing upon him. “I did not care much for the elephant,” said he, “for I have seen an elephant before, a bigger one than yours; but you have cheated me out of the ‘wonder of nature,’ which I came on purpose to see.” “You fool,” said the man, “you might easily have

known that the ‘elephant’ and the ‘wonder of nature’ are the same thing, and if you do not know it, you are a ‘wonder of nature’ yourself.” In like manner, the word power, individually applied, is the name of a certain state of that to which we ascribe power ; and the same word is used generally for all states of all beings or substances, in which they appear to our senses to be producing changes, either in themselves or in any thing else. This word is used, in the same way as we use all general names, to put us in mind of things that have a resemblance in some respects, with considerable room for difference in others—as flower for all sorts of blossom—quadruped for all animals having four feet.

## MARY.

Then it is the same as you told us formerly ; as there is not form apart from substance in a thing that exists, or substance apart from the qualities that we perceive in that substance ; so there is not power apart from that to which we ascribe the possession and exercise of the power.

## EDWARD.

Do not I know that I have the power of speaking, or of moving my arm, or of running, whether I be doing any of these things at the time or not ?

## DR. HERBERT.

I should think not. You may remember that

you spoke, or moved your arm, or ran, at a former time, or at many former times ; and if you remember the state of all your feelings then, and feel the same now, you may, from the similarity of all the circumstances, in as far as you know of them, conclude that you can do the same thing now ; but that does not establish a certain and separate power of doing them, or even an absolute possibility that you can. People have thought, as you now think, that they could do those things, and for the very same reason—the remembrance of having done them before ; and yet, from the occurrence of some additional circumstance which has taken place without their knowledge, they have found themselves unable when they made the attempt.

#### CHARLES.

I remember an instance. When Sampson was shaved in his sleep, by the Philistines in Gaza, he thought, upon awaking, that he could perform the same feats of strength as ever ; but when he tried, he found he could not.

#### DR. HERBERT.

As age stiffens our joints, and blunts our organs of perception, we are all “shorn Sampsons,” in one way or another. There was a time when I could run as fast as any of you, and read the smallest print without spectacles ; and if I were to remember only that time, and forget the states that have led to the change, my belief would be that I could do those things still.

## MATILDA.

And is all that we call power, of which we speak so much, and to which we attach so much importance, nothing but the appearances which things present to us when they are placed in certain circumstances ?

## DR. HERBERT.

That is the simple and safe view of the matter—the only one that can be taken without the danger, I had almost said the certainty, of falling into error.

## CHARLES.

But if there be no such thing as power, why should there be, in all languages, a word which means power ; why should every body use that word ; and why, when we see any change taking place, or observe that any change has taken place, should we always refer the change to some active being or thing which we can call an agent, and say that it accomplished the action of which we see the effects, in consequence of some active power that it has exerted ?

## EDWARD.

If to-morrow I should find a tree, which stood entire when I saw it to-day, with its trunk divided, its top and branches laid on the ground, and its leaves all withering, I could not help thinking and being sure that some agent had

been at work there, which had power to break down the tree ; and I could tell from the appearance of the divided part, whether the tree had been broken by the wind, cut by a saw, or felled with a hatchet. I can tell, not only the cause of what has been done to the tree, but the causes of that again—as that the atmosphere had been put into that state of rapid motion which we call a gale of wind—by a great expansion of the air at some place—by the application of heat, or the condensation of it at another place, by the application of cold ; and I might be able to tell the cause of this heating and cooling, as in the heating of the surface of the earth by the action of the sun during the day, and the cooling of that surface during the night in the absence of the sun.

DR. HERBERT.

No doubt you might ; and you might trace the chain of observation a great deal further than this, till you had exhausted all the information which physical geography affords on the one hand, and till you had followed the tree to its formation into some domestic implement, or to its being converted into smoke and ashes by the process of combustion ; but in all this you would not have found any thing that you could properly call a cause, as a thing to which you could, from the examination of itself, and itself only, ascribe any quality that you could call power. At every step that you went backwards in the chain, your cause would

become an effect—as the wind, though the cause of the breaking of the tree, is, by your own account, the effect of the heating or cooling to which you allude. There is no power in the air itself, unless the heat or the cold put it in motion. As little is there any power of heat in the surface of which you make mention ; for that again depends on the presence or the absence of the sun. So that, you see, if you are to have a cause and an effect, in the common meaning of the words, you must confine yourself to one event, or, rather, to the two events that are immediately nearest to each other in any succession. You remember coming in wet, the other morning ; what was the cause of that ?

EDWARD.

I lost my balance in the tree, and tumbled into the pond.

DR. HERBERT.

And should you have lost your balance if you had not got into the tree ?

EDWARD.

Of course not.

DR. HERBERT.

Should you have got into the tree, if you had not first got into the field where it grew ?

EDWARD.

Certainly not.

DR. HERBERT.

Or into the field, if you had remained in the house ?

EDWARD.

No.

DR. HERBERT.

Or out of the house, if you had been unable to leave your bed ?

EDWARD.

No.

DR. HERBERT.

Then which of all these was the real cause of the ducking ?

MARY.

I think they were all causes in their turn ; and that which was the cause of the last event, was merely the effect of the event before it.

DR. HERBERT.

That was precisely the case. There was nothing but a succession of events or changes ; and after stating what was observed to happen, we should not make the matter a bit plainer, though we gave a *power* to each of the events in the succession, when we called it a *cause*, and took that

power from it when it became an *effect*. The mere facts of Charles being fond of climbing trees, and there being a pond under the willow, would not have ducked him in the pond if he had not gone there ; and, in like manner, though you refer to the beings or things that have been engaged in any event before, you cannot conclude that they will be engaged in a like event again, unless you be sure, from careful observation, that they are in the very same circumstances. The only meaning that we can attach to the word *cause*, therefore, is, that it is the first of two events, which happen in the order of time or succession ; and the only meaning that we can attach to the word *effect* is, that it is the event immediately following the cause, without any other perceptible event intervening between them. If we be familiar with the two events, and have never observed the former without the latter following it immediately, then it is impossible for us to suppose that the one can ever take place under the same circumstances without the other following. In such cases, we say that the first event, or *antecedent*, is the certain and invariable cause of the last event, or *consequent*. Also, if we have never met with the second event, except following immediately after the first, we cannot avoid calling the second an invariable or necessary consequence of the first, or calling the first the sole cause, that is, the only cause of the second. In all this, however, we could add nothing

to the mere observation ; for all that we mean, or can mean, by the words “certain” and “necessary,” is simply, that we never knew of the succession being otherwise. It does not follow, however, that it may not be otherwise. Our knowledge may be so imperfect, that it may omit the very circumstance which is the antecedent ; and though we know all the rest, we may fail in the next instance, just because we are ignorant of that.

CHARLES.

Then if we can have no knowledge of causes, why should we talk about explaining the causes of phenomena—or, indeed, why should we pretend to have any knowledge whatever ?

DR. HERBERT.

Instead of preventing our knowledge, Charles, this is the only way in which we can inform ourselves rightly. The cause of any event we cannot explain ; we can only name it as the event immediately preceding : for if we make one other inquiry respecting it, it ceases to be a cause, and becomes an effect.

MATILDA.

Then, if all that we can know be only the events that immediately follow each other, the whole of our knowledge is very simple, and may be easily acquired.

## DR. HERBERT.

Certainly ; and it is probable that this very simplicity is the reason why men are so apt to neglect that knowledge which can be found, and which their powers of observation and perception are so well calculated for finding, and follow after that which they always miss, because it does not exist to their perceptive powers, and therefore cannot be found. If we knew all the antecedent and also all the consequent events in nature, as invariably following each other, we should be in possession of all the knowledge of nature ; and, from any passing event, we could retrace backward, or reason forward, to any extent that we pleased. We only know what we do actually know, and can set no limit to those successions of occurrences of which we are ignorant ; neither can we be sure that we are in possession of all the qualities of a substance, or all the circumstances of an event, because we are not able to examine the one, or observe the other, in all ways that may be possible. But that which is inaccessible to our observation and experience, we hold to be absolutely invariable, until some fresh discovery—the result of some new combination, brought about without our contrivance, or by chance, as we call it—or of some experiment which we make intentionally, forces us to alter our opinion, by putting us in possession of knowledge that we had not before. In this way, every accession is so much

more knowledge, as we have a fact of which we were not possessed before. But when we speak of *power*, or *cause*, in any other sense than as the antecedent of two events, we add nothing to our real and useful knowledge, though we get a duplicate of language, the one part being either precisely the same meaning as the other, or no meaning at all.

EDWARD.

But have I not *power* to move my arm? I can do it whenever I *will*, if there be nothing the matter with it.

DR. HERBERT.

Your saying that you have power does not give you any information beyond what you would have if you simply said that, when you were in certain circumstances, those of health and freedom from restraint (which you must have known before, or else you would not be able to tell whether they could enable you or not), the will to move your arm is instantly followed by the motion of the arm.

CHARLES.

Then, if there be no powers or causes, why should we pay any attention to them?

DR. HERBERT.

If the effects follow them, Charles, we need not

trouble ourselves about powers, of which we are never able to get any knowledge. If the act which you wish to perform follow your will or mine, in the very manner, and to the very extent that we wish, are we anything the worse that we have not a something else, beside ourselves, called our power, to do it for us? And if we are unable to accomplish what we wish, are we any better for being told, that not we, but our defective power, is the cause of the failure?

## MARY.

I should think that the supposition that we had a power, independent of ourselves, upon which our success, or our failure, depended, would make us indifferent, by making the praise or the blame not, strictly speaking, ours.

## DR. HERBERT.

And, in the same manner, if we attribute to the productions of nature certain occult and invisible powers, separate from those properties that we observe in them, it cannot fail in making us in so far indifferent to the qualities, and send us to dispute about imaginary power, instead of observing real qualities. This is the source of all the false philosophy that has been produced, both with regard to physical subjects, and the study of the mind; and men have failed in obtaining information, just because they have wearied themselves in seeking for it where it was not to be found.

## CHARLES.

But if knowledge be thus simple, how do happen that mankind have always been occupied in searching for causes, and talking about powers? If the road of nature and truth be so simple and so obvious, why should they constantly leave it for the longer and more laborious paths of error?

## DR. HERBERT.

The cause of error itself is just as much a matter of mystery as any of those causes in search of which we err. It is probable, however, that the whole arises from the perversion of that principle of our nature, without which we should be unable to exist—the desire of knowledge—the wish, when we know any event, to find out other links in the chain, so that if a similar event should again occur, we may be able not only to know what has gone before, but what is to follow after. The same desire leads us to examine the continuity,—to search, between the two events that first present themselves to us, in the succession of cause and effect, for other events that may stand in the same relation to one another and to these. Thus we get our notions of remote and immediate causes—as in the case of Edward getting the ducking, his not being at home at his studies was a remote cause, and his falling into the pond the immediate one; and as, the more that we examine

any case, the more of these intermediate events we find, lengthening out the chain of causes and effects, we very naturally come to the conclusion that, in every case, there is still an intermediate something that could be found, till by following the reflection upon this train, after the observation of it can be carried on no longer, we come to the notion—or rather the dream (for that which has no real foundation is nothing but a dream)—of power and necessary connection. The deception is rendered more imposing by the fact, that those intermediate appearances which we are accustomed to call explanations, or explanatory circumstances, are all in themselves just as difficult as that which we wish to explain by means of them.

Take a common case,—the musical sounds that are produced when the fingers are applied in a proper manner to the keys of a piano-forte. One who never had previously seen the instrument, and whose whole knowledge of it was in consequence confined to the mere fact of sound being emitted when the keys were touched, and none when they were not, would, as a matter of course, consider the touching of the keys as the cause of the pleasurable sensation arising in the mind.

#### MATILDA.

We know, however, that they would be wrong, and would conclude thus only because they were ignorant of the nature of the instrument. The keys

would not produce music at all, unless they were made to touch the wires.

MARY.

And though they did, the sounds would not be music, unless the wires were in tune, and the proper ones struck in succession, and allowed to vibrate for the proper time.

CHARLES.

Nor would even that be enough ; the vibrations of the wires would produce very feeble sounds, if it were not for the vibrations of the instrument itself ; and the vibrations of the instrument would produce no sound if it were not for the elasticity of the air. When we had the little bell in the exhausted receiver of the air-pump, it did not ring, however hard we struck it, but it did the moment the air was admitted.

EDWARD.

And though the air did vibrate, we could not hear the sound, if the vibrations did not reach our ears ; and even then, they might be so diseased that we could not be capable of hearing.

DR. HERBERT.

Nor would the difficulty stop there ; for though the ear appeared to be perfect in its form and structure, yet if we were to divide the auditory nerve, which we suppose transmits the influence

produced upon the ear to the brain, and occasions there that change, or state, which we call hearing, the sound would be as unknown to us as if the whole of the previous chain of causes and effects had never taken place.

## CHARLES.

But this is the explanation that we formerly got of the hearing of the sound of a musical instrument, or of the succession of changes that take place in the instant—so brief that we are hardly conscious of it—which intervenes between the touching of the instrument by the player, and the impression of the music upon the perception of the listener.

## DR. HERBERT.

So it is ; and every step of it is not only knowledge, but valuable and essential knowledge ; for if, at any one step of the process, the circumstances were changed, a change would be produced in the ultimate effect. As a series of observed facts, which have invariably followed in the same order, every time that we have had occasion to notice their recurrence, it is strictly a part of philosophical information ; but though the points of the succession have to our belief come nearer to each other, the blanks between them are in reality just as wide as ever ; and each of the individual sequences into which we have thus been enabled to break the original one, is just as difficult as that

was before we thought of making the slightest interpolation.

CHARLES.

Then if the whole of our knowledge be confined to the mere observed appearances, and if there be no such thing as power or cause that we can find out, I do not see why we should reason at all ; we ought rather to content ourselves with the mere appearances.

DR. HERBERT.

That is an opinion which is very apt to intrude, when we part with the unknown ground upon which we had been vainly attempting to make discoveries, and come to that on which all is plain and palpable. I have endeavoured to impress upon you already, that we can have no knowledge of things as existing in space, beyond what we actually observe of them. We have found that it is the same in the succession of events in time. The most acute and elaborate reasoning cannot discover a new quality, or put us in possession of a new fact. But it does not follow from this that reason is useless ; for similarity of sequence among events, is found in the same manner, and by very nearly the same process, as similarity of qualities ; and from our knowledge of the phenomena of the past, we are not only able to perceive of what former causes present causes are the effects, but of what future effects present effects

will be the causes. In as far as our observation has been accurate, and the result uniform, we can concentrate the whole known history of the world into a single instant, and avail ourselves as completely of the experience of those who have lived thousands of years ago, as we can of that which we ourselves have felt in the moment immediately preceding. Nor is this all ; for we can try as many experiments—that is, make as many new combinations—as we please ; and by attending carefully to the circumstances, and the results of those, through a sufficient number of trials, we may increase our knowledge almost without limit, by the introduction of new trains of succession, which might never have come within our notice in the natural course of events. The discoveries of those properties of matter—properties which were not so much as imagined to exist—which have so amply repaid the labours of the modern chemists, and which have gone far in changing the whole conduct of the arts, and the whole economy of society, are proofs of this, as important as they are numerous and varied ; and they clearly show that the labour of thought can be usefully expended, only when it is occupied about that which can be observed.

## CHARLES.

That, however, is the philosophy of matter, and not of mind.

DR. HERBERT.

The perceptions that we have of mind and matter are the same ; for though the intelligence may be brought by a different organ—as the colour of a tulip may come to us in the beams of light that are reflected from that tulip ; the perfume of a rose may come in the odoriferous particles, enjoyable only by the organs of smell, that float on the air to some distance around it ; or the song of the bird, which comes to us in little pulses or nerves that act upon the organs of hearing—yet we are just as ignorant of the process by which those organs convey the perception to the mind, as we are of the impressions which the states of the mind give and have of their own existence.

EDWARD.

But these are all produced by something external—something that exists independently of us, and therefore they must be different from that which is a mere thought.

DR. HERBERT.

The colour, the odour, or the sound, whatever is the object of any of our senses, is known to the mind only as an impression of the mind, that is, a state of the mind itself ; and as, when one of the senses has been wanting from the beginning of life, there is nothing in the other senses by which the impression made by the objects of the deficient

one can be communicated to the mind ; so, of impressions that arise in the mind itself, without any necessary presence of external objects, or any impression whatever upon the external organs of sense, the mind has in itself just as much knowledge, and knowledge precisely of the same kind, as it has of those matters that are the objects of the senses.

CHARLES.

Is it possible that the knowledge that we have of external nature, which is constantly undergoing changes and decompositions—of our minds, which must, as you have told us, and as I myself feel, be quite incapable of decomposition—and of the Supreme Being, from whom the external world and our minds had their beginning—can be the same !

DR. HERBERT.

The knowledge that we have of different subjects, as it refers to those subjects, must differ with their differences, otherwise it would not be knowledge at all ; but in as far as it relates to the mind it is in its nature the same ; and the states of mind, produced by the impressions received from the external world, do not differ more from one another than some of them that arise from our internal reflections, without any necessary reference to the external world, at least to those parts of it that are before us at the time ; and indeed the

effect of those trains of internal thought is always the greater, the more that we are indifferent to the objects of sense.

CHARLES.

I have often felt that. I have found that when I am alone in a room, or in a solitary walk, I can think myself into joy, or grief, or anger, or any other state that I please, without being able to find out how I do it; and I find, also, that when my attention is called back to the realities about me, the train of thought is at an end.

DR. HERBERT.

But I dare say you have found, that the state of feeling to which the train of thought led, did not vanish immediately with that train; but remained, and qualified or disqualified you for that which you were to perform, according as it was of an arousing or of a depressing character. This tendency of the mind has many practical advantages; and, when under proper discipline, it bears us up against the ills of life, and excites us to a more effective performance of our duties.

MATILDA.

But we may be very strongly affected by a dream, which has no reality, but which we remember with all the accuracy of a scene or an occurrence which is real; and yet the knowledge of the

mere dream cannot be in any way similar to that of the reality.

## DR. HERBERT.

In as far as they are states of the mind, they are, in their general nature, the same: and if the dream were wholly mental, and had no reference to those qualities of external things, which cannot be perceived but through the medium of the senses of the body,—if the dream were a mere effort of the mind with reference to itself, as in the consideration of its own existence, or its own identity, or if it were concerning an angel, any thing respecting the Deity, further than what is demonstrated in his works, and declared in his word, it would not differ in any way from the same impression occurring without the presence of sleep. The field or the fortune that we body forth to our imagination, in a waking reverie, is just as much a dream as the involuntary one that the same imagination creates when we are asleep.

## MARY.

I have found, that when I have pursued one of these reveries, I have completely forgotten where I was and what I was about.

## DR. HERBERT.

That has been the case with more profound thinkers than any of us, Mary. I knew a learned

professor in one of the Northern Universities, who was so completely absorbed with his own trains of thought, that he used to take off his hat to cows, and apologize to posts when he hit his shins upon them in the streets.

EDWARD.

He must have been a very great fool surely.

DR. HERBERT.

So much the reverse, that he was not only one of the most profound thinkers of the age, but one who, in his writings, expressed himself with the greatest perspicuity ; and he was the first man that made the people of this country understand a truth, which, now that it is known, we think so plain that we never dispute about it.

CHARLES.

What was it, father ?

DR. HERBERT.

A very simple one, Charles, but very useful to young men : that a man who is in debt never can get out of it by borrowing money.

EDWARD.

Then is inattention to the matters about one, a sign of thinking ?

## DR. HERBERT.

Certainly not. It is merely a want of observation ; and we must have evidence whether it be the *inattention* of the idle, or the *abstraction* of the thoughtful ; the first of which is a cessation of all mental activity whatever, and the second so complete an occupation of the mind with its own thoughts, that the organs of sense cease to give impressions of the objects that are before them.

## CHARLES.

But if the absence and the excess of thought be so very like each other, that we can distinguish them only by their effects, how can we know any thing at all about thinking ?

## DR. HERBERT.

When we ourselves think, it is not possible that we can have any doubt about the matter, any more than we can have of the motion of our hands which we see, or the sound of our voices which we hear ; but none of us could find out that another is thinking, unless the thought were followed by some event or change that could be perceived by the senses.

## MATILDA.

But we say, that a person is thoughtful or not thoughtful ; and when we make use of such ex-

pressions, we do not allude to any action done by the party.

DR. HERBERT.

Then what do we mean ?

MATILDA.

We mean, that there is something in the look, the attitude, and features of the one party, that is a sign of thinking; and that there is no such sign in the other party.

MARY.

I should think the look and the attitude, which denote thought, inasmuch as they are different from those that denote the absence of it, are effects of the thought itself.

DR. HERBERT.

Unquestionably they are, Mary. We consider them as signs of thought, because we have found them in the same succession of events, of which thinking formed a part. Those who have attended carefully to the appearances, in the general attitude of the body, the position and action of the limbs, and the expression of the countenance, are able to make very close guesses, not only at thinking, but at the species of thought. This is especially the case with all matters of thought in which we take a great personal interest, or which,

in the language of common life, excite our feelings or passions. It is this application of intellectual philosophy which renders a person a good orator, a good actor, a good painter, or statuary, or writer, upon any subject that is intended to bring human nature forcibly to the observation of a spectator, or to the understanding of a reader.

## MARY.

But the greatest men, in these respects, that we have any account of, have been self-taught ; and from what you have stated, it would appear that instruction in the philosophy of the mind is necessary.

## DR. HERBERT.

Everybody that is taught at all, Mary, must be self-taught : and the grand difference between those great men to whom you allude, and the men whom we have been in the habit of calling learned, is, that the former have studied man himself, as he exists in nature ; and the latter, that false representation of him which is written in books. The one class have been successful, because they have contented themselves with seeking what could be found ; the other have failed, because they have endeavoured to find that which could not. The one have been *experimentalists*, and contented themselves with observing facts or phenomena, and remembering the order in which these have

followed each other; the others have been *theorists*, forming their system while they were ignorant of the facts, and then endeavouring to make the facts correspond with the *theory* or the hypothesis.

EDWARD.

I do not very well understand what is meant by a theory, or a hypothesis.

DR. HERBERT.

Then we cannot have a better subject for our next conversation; and if we shall be able to understand that, we shall have mastered one important portion of our inquiry—by knowing how we are to proceed with it: the first part of all inquiries, though by some very unaccountably made the last.

## CONVERSATION IV.

## HYPOTHESIS AND THEORY.

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DR. HERBERT.

Can any of you tell me the meaning of the word theory?

CHARLES.

I think it means all that we know about any subject.

EDWARD.

I do not think that, Charles; for, you know, we have theories of the motions of the planets, by Plato, and Ptolemy, and Tycho Brahe, and Des Cartes, and Copernicus, all contradictory of one another. They cannot be all true; and the ones that are false are not knowledge—they are merely opinions, and opinions that are wrong.

MARY.

I rather think a theory of anything means all that we believe about it, and may be either true or false, according as it does or does not agree with the facts.

DR. HERBERT.

That comes nearer the truth, Mary. And can you tell me how far such a theory can be useful?

MARY.

Only so far as it is true; the part of it which is false must be more than useless, for it leads us wrong.

DR. HERBERT.

And, so far as it is true, what do you suppose to be the use of the theory?

EDWARD.

To enable us to explain anything: as we explain how a stone falls to the ground, or how a smooth ball will not remain at rest, on an inclined plane by the theory of gravitation.

DR. HERBERT.

And how do you explain those matters?

## EDWARD.

I say, that the stone falls because the air through which it falls has less specific gravity than the stone; and that the ball will not rest on the inclined plane, because the line of direction, or perpendicular to the earth's centre, through the centre of gravity of the ball, falls below that point of the ball which is in contact with the inclined plane.

## DR. HERBERT.

This certainly sounds better than the vulgar saying, that "the stone falls," or "the ball rolls;" but, in point of information, there is not much difference; for the "why it falls," and the "why it rolls," are left as much mysteries as ever. Is the theory anything apart from the facts—is the theory of a stone falling anything but the fall of the stone as seen at the time, or recollected by the memory, or repeated on an authority that we have no reason to doubt?

## CHARLES.

From the fall of one stone, under any circumstances, I can reason that any other stone will fall, if placed in the same.

## DR. HERBERT.

And how do you come to that conclusion?

Would your belief have been the same, think you, if you had never seen a stone but one, and that one had been flying upward without your seeing the hand or the engine from which it had been projected ?

EDWARD.

I should have been apt to think that the next stone I met with could fly.

DR. HERBERT.

Then the theory of any matter is nothing but the successive phenomena of that matter, arranged in the order in which they have been observed to happen. If the order have never been found to vary, the theory is called true, and the truth is confirmed by the number of repetitions. If the repetitions have been few, the probability is weakened ; if there have been instances in which the events have been different, it is rendered doubtful ; and if we take into the connexion a single event that we never knew to happen in it, our theory ceases to be knowledge, and becomes an imposition.

CHARLES.

Is not this gratuitous part of the theory—this reasoning over and above the knowledge or the facts—what is properly termed a *hypothesis* ?

DR. HERBERT.

That is pretty nearly the meaning of the term.

A theory is, or ought to be, a succession of events which we have observed to happen in a certain invariable order ; and a hypothesis, a succession, which we name or suppose without having observed them.

EDWARD.

Then it follows, that a theory must be true, and a hypothesis false.

DR. HERBERT.

Not always. New knowledge may overturn a theory which was formerly true ; and new knowledge may confirm that which was only a hypothesis. Before it was known that nitric acid could not dissolve gold, the true theory of that acid was, that it dissolved all the metals ; and the surmise of Newton, that water, and the diamond, from their refractive powers, contained combustible ingredients, which remained a hypothesis, and a neglected hypothesis, till long after the death of that illustrious philosopher, has been fully confirmed by the discoveries of chemistry—water being composed of hydrogen, the most inflammable, and oxygen, the most inflammatory substance with which we are acquainted, and the diamond being found to be pure carbon, altogether soluble by combustion.

MARY.

Then both theories and hypotheses have their uses ?

## DR. HERBERT.

Certainly. If the theory be extended no further than we know, it is the same thing with our knowledge: and it has the advantage of being that knowledge systematically arranged; by which means we can not only call it more readily to mind, but make it useful in the acquisition of more knowledge. To use a homely comparison, our theories are the threads upon which we string the beads of fact that we obtain by observation; and when so strung, we do not lose them, or confound the sorts. The theory of gravitation is the arrangement of the facts of gravitation; a theory of the weather would be an arrangement of the facts of the weather; and on all subjects to which we can turn our attention, the theory is nothing more than the arrangement of the phenomena in the order in which they take place.

## MATILDA.

Then, can a theory ever be useless?

## DR. HERBERT.

Not exactly useless, Matilda; but theories have often been very mischievous. Our desire of information is much stronger than our desire of submitting to the labour and waiting the time requisite for our being informed; or, which is the same thing, it is easier to wish than to work; and, therefore, as the wish must always come first, we

are apt to stop at that, and build our castle in our own imaginations, as it is done at once, and we have not to carry the bricks and mortar. The errors of theory, like all the other errors of our thinking and acting, arises from our believing in something that we cannot know ; and flattering ourselves, that events, of which we have no knowledge, will happen in the way in which we wish them to happen. The disposition that we have to form imaginary theories, or extend real ones beyond the facts, is much the same with that which leads folks to speculate in lotteries,—they think better of themselves than of others. I knew a young mathematician, who having, in one of his exercises, proved the small chance of gaining anything in the state lottery, laid out all his pocket-money in the purchase of shares. While we ought to be carefully on our guard against theorizing, we should be charitable to those who do—as there perhaps never was a human being that thought, who had not a false, or at least hypothetical theory on some subject. Newton theorized about an ethereal fluid, though he could not ascribe a single phenomenon in nature to any of its qualities.

EDWARD.

But, surely, hypotheses, which, as you have explained them, are not knowledge, but ignorance, might well be spared as useless.

DR. HERBERT.

By no means, Edward. Hypotheses are the

keys with which we open the store-houses of knowledge, and, when properly used, they never fail in guiding us to what we seek, or to the alternative, (which also is knowledge,) that what we seek is not to be found. Without hypotheses we should be deprived of the whole of that portion of our knowledge which we obtain by experiment—the source of all our inventions in the arts, and our discoveries in the sciences. The hypothesis upon which we proceed may be false,—the object which we have in view may be unattainable; but still, if we are induced to experiment and to observe, we must discover something. So long as we keep hypothesis in its proper place, and use it as a means of acquiring information, it is valuable; and it becomes an evil only, when we try to pass it off for what it is not—calling it knowledge itself, and not the mere road to it.

## CHARLES.

Then, theory is the arrangement of the information that we already possess, and hypothesis the arrangement of that of which we are in quest.

## DR. HERBERT.

Partially so, but not altogether; for in our inquiries we may proceed either by theory or hypothesis. Where the quality or event of which we are in quest is altogether new, we have nothing but hypothesis to guide us; but when the quality is similar to a known quality, or the event a repetition of a known event, we proceed upon theory,

or, as we call it, upon a fixed principle. Thus, if the inquiry were, whether a certain piece of matter, the specific gravity of which were unknown, would or would not sink in water, that inquiry would be pure hypothesis up to the moment of making the experiment ; but if it were whether a piece of matter, of a given specific gravity, would or would not sink in water, we would proceed upon theory, and would conclude that our observation had not gone to the whole case, if we found the experiment to vary from the theory.

## MARY.

When astronomers calculate the places of the celestial bodies, and the times of eclipses, and other phenomena of the heavens, they proceed upon theory ; but when the astrologers attempted to connect those events with the events of society, they proceeded upon hypothesis.

## DR. HERBERT.

Yes ; with this explanation, that, in the case of the astronomers, the sequence of antecedent and consequent, or of cause and effect, as we call it, had been observed to be uniform and invariable in all instances ; while, in the case of the astrologers, the sequence had not been observed in any one instance.

## EDWARD.

What, then, should have led the astrologers

to make the assertions, or anybody to believe them?

DR. HERBERT.

A wish to profit by the delusion of others, on the part of many of the astrologers, and those who employed them, no doubt; and the general error of the ignorant, that of receiving the conclusion without attending to the fact, on the part of their dupes.

MATILDA.

After they had got a number of alleged coincidences between the prediction and the result, I can imagine that they might succeed; but I cannot think how they would do at the first.

DR. HERBERT.

That calls to my recollection one source of error in the consideration of cause and effect, to which I omitted to direct your attention, while we were conversing on that subject. The events that are happening at any one time are innumerable; and though each of these be the effect of the immediately preceding event, and the cause of the one immediately following, yet their coincidence in point of time must, in all cases where we are ignorant (and, even to the wisest of us, there are many), leave us exposed to the danger of confounding one train with another. Thus, an eclipse of the sun may be immediately followed by the death

of a monarch, the loss of a battle, or the conflagration of a city ; they may have perfect continuity in time, and they may also have proximity in place, which are, after all that we can observe, in the sequence of the same train of events. They are in their own nature striking; and, therefore, to those who are not aware of the intervention of the moon as the cause of the eclipse, which is not a necessary discovery by the sight, the moon not being visible when in the close vicinity of the sun, the eclipse, which is an effect and the cause only of the partial obscuration of the sun, may be considered as the cause of the disaster. Other circumstances are likely to contribute to the delusion : the great body of those who hear of the fact, may be ignorant of the decease of the monarch, the inferior strength or skill of the vanquished army, or the casting of the brand that set fire to the city. They have thus both a cause and an effect to dispose of, in sequence, as far as their information goes ; and, therefore, that they should join these together, is by no means unnatural.

## CHARLES.

But in these cases, the causes which are thus misplaced, are all of a very mysterious nature.

## DR. HERBERT.

That, of course, is the very reason why they are misapplied. Even the most ignorant do not attribute every-day occurrences—such as their own

health, the progress of vegetation, the flowing of the river, or the apparent motion of the sun—to any thing supernatural. The witches did not keep people in health, or ripen the corn, though they were supposed to produce sickness, and blast the crop; and they were not supposed to do even these things by their ordinary powers, in the same way as people do their common business: they did it all by means of some power delegated to them by a being having superior abilities to theirs. The whole of the events to which superstition applied, were those which had a powerful influence upon the feelings of the parties, and of the real causes or antecedents of which they were ignorant. Thus you see that we must not only be on our guard against using hypothesis in the place of observation, but we must be equally careful not to confound the sequences in matters that we do observe.

MARY.

But how are we to apply these cautions to the study of the mind, in which there is nothing to be observed at all?

DR. HERBERT.

We must proceed just as in any other case; we must notice the states of it, as they are excited by the perceptions of things external, and the trains of thought that follow in succession when we reflect.

## MATILDA.

But thinking is so very unlike what we think about, that I cannot see how the study of the one can lead us to any knowledge of the other?

## DR. HERBERT.

We do not know any thing about the mind, farther than that it thinks, and is one and indi-  
visible, and therefore indestructible; and, con-  
sequently, we are unable even to guess what it is  
like or not like. But there are cases in other  
parts of our inquiry, where we have phenomena  
that lead us to conclude that there is a substance,  
although, to our organs of sense, and the apparatus  
of our research, that substance has not yet been  
made palpable in a separate state.

## CHARLES.

Electricity is one of those cases.

## MARY.

Galvanism is another.

## EDWARD.

And magnetism is a third.

## DR. HERBERT.

And caloric. We know nothing about that, as  
separate from all other substances, as existing in

space, though its phenomena, as existing in time, be among the most familiar as well as the most important with which we are acquainted. We cannot ascribe to it any of the qualities by which we distinguish one piece of matter from another, such as weight, or hardness, or colour ; and yet we know as much about it as enables us to make it the most manageable, at the same time that it is the most powerful servant that we possess. Now, if there be a something, which performs compositions and decompositions, among physical substances that are almost endless ; and if we understand the sequences of the phenomena of it, just as well as we do those of substances that are palpable to the senses, apart from the rest of the material creation, there can be no bar in the way of our knowing the phenomena of that which thinks, if we confine ourselves to the phenomena, and do not attempt to be wise beyond human possibility about the “ abstract essence,” words to which nobody could possibly attach any meaning whatever. The very same method which we resort to in the study of matter, will conduct us rightly in the study of mind.

## CHARLES.

But if the study of mind and matter be conducted in the same manner, would not that lead us to conclude that matter and mind are the same, or that the mind is a material substance ?

## DR. HERBERT.

The similarity of the modes of study arises from the sameness of the mind that studies them, rather than from any thing analogous, far less identical, in the subjects themselves. The carpenter uses the saw in the same manner, whether that which he cuts be deal or oak.

## CHARLES.

But I have read about some who have contended that the mind is material ; and will not the similarity in the mode of studying it and matter, lead to such a result as this ?

## DR. HERBERT.

If we were to consider the mind as discernible apart from its perceptions and trains of thought, which we could not do without considering it as a separate substance, existing in and occupying some portion of space, then we could not well avoid considering it as material, because material substances are the only ones that we can know in this way. But if we attempt to describe the mind in this way, it will be the mere creature of our imagination. When we say a material substance, we always mean a substance composed of materials—a substance which admits of mechanical division, or chemical solution, or one which can enter into mixture or combination, so that its former appearances may, to a greater or a less extent, be altered. Now, we cannot even think of

the mind as being thus decomposable, or thus entering into combination.

CHARLES.

When the mind is affected by the impressions of external objects on the senses, and when all the motions and actions of the body follow the wishes of the mind, may we not thence conclude that the mind is in a state of combination with the body ?

DR. HERBERT.

Juxta-position, Charles, is not combination ; neither is connexion combination, in the chemical or even the mechanical sense of the term, any more than immediate succession in time is the observed sequence to which we give the name of cause and effect. Those senses by which we perceive the external world are not in combination with the mind that thinks, for we have experience of thinking without their operation, and even without the existence of some of them. When we separate the parts of a chemical compound, as when we decompose water by the oxidation of a metal, there is not a trace in the separated hydrogen by which we could find out that it ever was in combination with the oxygen. But the memory of sounds remains after the ear is deaf ; and, as was interestingly shewn in the case of Milton, the mind can paint new scenes of the most exquisite beauty and the

most stupendous grandeur, after the sight of the eye has been quenched for ever.

## MARY.

But the feelings that we have in joy and grief, in hope and fear, in success and disappointment, or in the remembrance that we have done well, or that we have done ill, are as different as those objects of the senses that are external ; and ought we not to consider them as arising from different qualities of the mind ?

## DR. HERBERT.

They have been considered as such by those who would have been very much mortified if they had been told that their doctrine of a compound mind, made up of many conflicting powers and passions, ever and anon in rebellion against reason, their governor, necessarily involved the notion that the mind is a material substance, that is, a compound of many parts or elements ; and when that is once admitted, there is no avoiding the conclusion that the parts of the compound may again be separated, and the mind cease to exist. Thus the notion of anything like composition in the mind, puts an end to the philosophy of mind altogether (and, in part, to the mind itself) ; and our disquisitions about the intellectual and active powers, the passions, the emotions, and all the other parts, into which the mind, as momentarily existent, is separated, are really disquisitions about

something which is material, and, in the consideration of our own minds, different from those minds themselves ; for by this the mind becomes like the ether, or the fifth element of the ancients, a material substance, of which we know nothing, and which is, therefore, a mere creation of the imagination.

EDWARD.

Then these opinions of the mind are not theories ; they are hypotheses.

DR. HERBERT.

They are purely hypotheses ; and as they tend in no way to regulate our inquiries, and cannot be verified by experiment, they are useless hypotheses—idols which, like all idols, waste our time and our activity in the worshipping, but do nothing for us in return. In this, as in every other part of a subject so very nice and difficult, the means of error lie thick around us ; and the truth is but in one direction—in the phenomena, that is, in the successive states of the simple, undecomposable and indestructible mind.

CHARLES.

If we cannot analyze the mind, I am at a loss to see how the study of it, however long, or however assiduously we attend to it, can give us any more knowledge than that which may be possessed by any one.

## DR. HERBERT.

The search after knowledge which may not be possessed by any one, is the search of we know not what. To go in quest of that is folly, and not wisdom. What our object should be is, to seek after that which anybody *may* know, but which few in fact do know, because they have not sought after it—the vulgar, from ignorance and indifference, and the learned, from the vain desire of having knowledge above others; not in degree only, which they might obtain, but in kind, which, as their minds, or means of perception are the same, is utterly impossible. *We* know more about some of the events and the substances in nature, than those who have not examined the qualities of the latter, and observed the successions of the former.

## CHARLES.

Yes, we know the causes and effects in the successions, and can analyse the compounds into the parts of which they are compounded.

## DR. HERBERT.

Well, the phenomena of the mind happen in succession; and we find that, in each succession, a certain definite perception or emotion follows a certain other, in the same manner, and with the same uniformity, that the perception of the persons and furniture in a room follows the introduction of lighted candles; and we also know that many of our perceptions and feelings are compounded of

simpler ones, into which they may be separated.

MATILDA.

Almost every perception that we have is compounded. Even that of so common a thing as a lighted candle, which we can separate into the candle itself, its being made of matter that will burn and give light, the application of the match to it, the degree of light, and so many other circumstances that I cannot name them.

MARY.

In like manner, when I am pleased or offended, there is the thing or thought that pleases or offends me, the reason why it does so, the propriety that it should do so, and a variety of other considerations, any of which might have existed separately without the others ; but the pleasure, or the offence, could not have existed in the manner that it did without them all.

DR. HERBERT.

Thus you see that the states of the mind are as capable of analysis as the substances in nature ; and as every compound state is, as it were, the common consequent to the whole of those other states, simple or compound, by which we have uniformly found it to be preceded, and which are therefore its causes, the analysis opens to us a train of discovery, by which we may not only

know, scientifically, the successive phenomena of the mind, just as we do those of the external world, but also found an intellectual art upon our intellectual science, and regulate those states of the mind that are productive of our conduct as individuals, and as members of society, in the same way that we found an external art upon our scientific knowledge of the mechanical and chemical phenomena of matter. As there is not a single event in the external world which is not consequent to some other event as an effect, and antecedent to a third as a cause, so there is not one state of our mind which is not consequent to a former state, and antecedent to a state that follows; and unless we have studied the successions with the same care, we must fall into the same errors in our thinking and acting, as we do in judging of the events of the external world.

## CHARLES.

I can perceive that we may fall into similar errors, as they who, by misplacing the cause and the effect, do, when they attribute the happening of a public calamity to the occurrence of an eclipse, or the appearance of a comet.

## EDWARD.

Yes, and the effect will be much more serious to us; as it will affect our own happiness, in which we shall not have the opinions of others

with us, as is the case with those who attribute external events to the wrong causes.

DR. HERBERT.

There is no question of it. If we could have the trains of our thoughts and feelings completely analysed, we should be on our guard against many of our errors, and spare ourselves much both of our mental regret and our external misfortune. Thus the philosophy of the mind, when diligently studied and properly applied, tends not only to make us wiser, but to make us better and happier; and while it does this, it is not, like most other branches of our knowledge, contingent upon external circumstances, and liable to the external decays of our nature. It extends, as we proceed; and when the scene closes upon the external world, it gives us confidence in that future hope, which, even in this world, is our best enjoyment in prosperity, and our only sure consolation in adversity —a consolation which, while we hold, (and once obtained, we cannot quit it if we would),—enables us to ride buoyant over the most troubled waves that can agitate the ocean of time.

From what we have already said, I trust you see how we are to proceed in our inquiry; and, therefore, when we revert to the subject, we may be able to begin the inquiry itself. There are two subjects to which you may turn your thoughts in the interim:—That we know ourselves and the other subjects of our knowledge, and that we

know that we are the same beings to-day as yesterday, and shall still be the same to-morrow.

EDWARD.

These are such very simple matters, that I do not think any body can have a doubt about them.

DR. HERBERT.

That they are simple, and never doubted or made the subject of questions, by ordinary persons, is true; but, as has been the case with many other matters, that are so simple that they cannot be made plainer by any speaking or writing than they are in the mere perception, they have been made the foundations of innumerable disputes; and in order that a man should be able to prove that he exists, and is himself, they have found it necessary to make a double man of him, and set the one part to work to know and prove the existence and identity of the other.

CHARLES.

In this double existence, they must have found difficulty; because they themselves must sometimes have mistaken the imaginary for the true, and whenever they did this, they must have been unable to prove any thing.

DR. HERBERT.

They were worse than that, Charles. Arguments, like inquiries, are no stronger than their

weakest parts. If there be but one false position in an argument, or one mistake in the nature of a substance, that error, or that mistake, spoils the whole. Parts may be true, and other parts false; but one falsehood destroys the truth of the whole.

## CONVERSATION V.

CONSCIOUSNESS, CONSCIENCE, MEMORY, SAME-  
NESS, IDENTITY.

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DR. HERBERT.

You have no doubt been thinking upon the subjects to which I requested your attention at the close of our last conversation. You will recollect that we had come to the conclusion, that the mind is one, thinking, indivisible, and indestructible existence; that we can know nothing about its nature apart from the states in which it necessarily exists, or, as we may term them, the phenomena of it; that we may observe the order in which these phenomena follow each other, as antecedents and consequents, or causes and effects; that each state of the mind, in a continued train of perceptions or thoughts, is an effect, considered in reference to that which immediately preceded

it, and a cause, in respect of that which immediately followed ; that if we do not observe carefully we shall be in danger of falling into the same errors, by connecting causes with wrong effects, and effects with wrong causes, as we are in the study (or rather the neglect of the study) of external nature ; and, that many of the states of the mind are compound, and that these we may analyse or separate into the simpler states of which they are composed, just as we may analyse compound substances into the simpler elements of which they have been made up.

EDWARD.

We can understand all these except the last one, and that we can also partially understand ; we can understand that some of the states are compound ; but still, as this individual state is only one state of the mind which cannot be divided, we cannot see how the simpler parts of which the compound state is made up, can be separated by analysis, as we can separate the constituent parts of a material substance,—as the acid and the alkali in a salt.

DR. HERBERT.

The analyses are certainly different ; because we require a material apparatus to act upon the material substances, and the other analysis is wholly an operation of the mind ; but still in the substantive part of the process there is very little

difference between them. When we analyse the salt, and get at the acid and the alkali, we merely retrace one step in the succession of external phenomena backwards, get from the salt as an effect to the presence of an acid and an alkali, in such proportions and under such circumstances as have been observed to be followed by their uniting in a salt. In like manner, when we would analyse any compound state of the mind—as the joy that we feel when we get possession of any thing which is gratifying in itself, and which we did not expect—when we trace this joy one step backward, and resolve it into the gratification arising from our regard for the thing itself, and our gratification arising from the novelty of its coming to us without our having expected it—these two parts are just as distinct from each other as the acid and the alkali ; and any one of them may exist as a separate state without the other. Each singly would have been a different feeling at the time from the compound of the two ; and each would have remained as a different portion of the memory, than that which results from the two together.

## MARY.

I can see that there may be many simple elements in the feeling or state of mind that one may have on a very simple occurrence ; and yet that those elements may all be so far of the same

kind as that they may tend to give strength to the compound feeling.

DR. HERBERT.

I dare say you can mention an instance.

MARY.

If I merely receive a letter, there is a pleasure in that; if it be one that I was anxious to have, the removal of my anxiety is a pleasure; if it came from a friend, that gives me pleasure; if it be well written, there is a pleasure in that; there is a pleasure if it contain agreeable information, and there is also a pleasure if this agreeable information be about myself, or any one else in whom I feel an interest. It is pleasure on the whole—pleasure in all the parts of which it is made up; and the pleasure would be changed by the absence or the alteration of any of those parts.

CHARLES.

It is very difficult for one to imagine any feeling that could not be thus analysed.

DR. HERBERT.

And it is almost as difficult to imagine any thought, however simple and however transient, that stands alone without connecting itself with the past, or influencing the future; and thus the

most trifling state of the mind becomes a matter of the greatest consequence, if we are to make the proper use of our power of thinking, by turning it to the acquisition of knowledge and happiness.

The late Dr. Thomas Brown, of Edinburgh, one of the most profound and accurate, as well as one of the most elegant thinkers that ever made the human mind his study, gives a description of it at once so touching and so true, that though I shall not fatigue you with books and systems till we have conversed more upon the subject, I cannot refrain from reading it to you.

“Mind,” says that excellent and eloquent philosopher, “is capable of existing in various states, an enumeration of which is all that constitutes our knowledge of it. It is that, we say, which perceives, remembers, compares, grieves, rejoices, loves, hates; and though the terms, whatever they may be, that are used by us in such enumerations, may be few, we must not forget that the terms are mere inventions of our own, for the purpose of classification, and that each of them comprehends a variety of feelings that are as truly different from each other as the classes themselves are different. Perception is but a single word: yet when we consider the number of objects that act upon our organs of sense, and the number of ways in which their action may be combined, so as to produce one compound effect, different from that which the same objects would produce separately,

or in other forms of combination, how many are the feelings which this single word denotes!—so many, indeed, that no arithmetical computation is sufficient to measure their infinity.

“ Amid all this variety of feelings, with whatever rapidity the changes may succeed each other, and however opposite they may seem, we have still the most undoubting belief, that it is the same individual mind which is thus affected in various ways. The pleasure which is felt at one moment, has indeed little apparent relation to the pain that was felt perhaps a few moments before; and the knowledge of a subject, which we possess, after having reflected on it fully, has equally little resemblance to our state of doubt when we began to inquire, or the total ignorance and indifference which preceded the first doubt that we felt. It is the same individual mind, however, which, in all those instances, is pleased and pained, is ignorant, doubts, reflects, knows. There is something ‘changed in all, and yet in all the same,’ which at once constitutes the thoughts and emotions of the hour, and outlives them,—something which, from the temporary agitations of passion, rises, unaltered and everlasting, like the pyramid that still lifts the same point to Heaven, amid the winds and whirlwinds of the desert.”

EDWARD.

I feel it. I remember the time when I cared only for hoops and hobby-horses, and now I have

learned a great many things ; but I was Edward then, I am Edward now, and I shall be Edward while I live, though I should become a king, or a philosopher, or even a fool.

DR. HERBERT.

Let us take what may be apparently the simplest of the three states, the fact of your being Edward at the present moment : how do you prove that, or how could you convince any body of it ?

EDWARD.

I know not how I might convince any other person of it, but I feel that I cannot have any doubt of it myself.

DR. HERBERT.

And yet there have been philosophers that have not only doubted but denied it.

CHARLES.

Denied their own existence ! why, surely that is impossible ; for the existence itself is necessarily involved in being able to deny it. If they denied the existence, they must have denied the denial of it, and been, after all, just in the same state as other people.

MARY.

They might, with just as much propriety, have

denied the existence of the earth, or the sun, or any or all of the material universe.

DR. HERBERT.

So they might, and indeed with a good deal more propriety ; for as the existence of no one individual part of the external world is absolutely necessary to thinking, the knowledge which a mind has of its own existence, that is, of its thought, is more intricate than that of any thing external. May not our senses deceive us ?

CHARLES.

In the qualities and uses of things, which are discovered only by experiment and experience, they may ; and there may be things that are too small or too remote for being perceived by our senses ; but if the organs of sense themselves be not deceived, we can have no doubt about the actual existence of anything that we perceive.

MATILDA.

But many people have believed in apparitions, which of course had no existence ; and I myself, after looking stedfastly for some time at the setting sun in the west, saw the appearance of suns, of a greenish colour, upon turning to the east.

DR. HERBERT.

The apparitions are mere creatures of the mind

itself, formed much in the same way as the new scenes and worlds that we see in dreams, and of which we have often a more lively remembrance than we have of some scenes that actually exist. The mind is so impressed with, or rather so identified with its own thoughts, (from the very unquestionableness of its own existence,) that, instead of noting a belief in the reality of what has been perceived through the medium of the senses, it often comes, by their recurrence in trains of thought, to believe in the reality of that which was at the first only imagination. It is thus that the power of receiving truth, when not properly exercised, is in danger of picking up error, and mistaking that for truth.

MATILDA.

But the green suns? I *saw* them.

DR. HERBERT.

I question not that you did, or that any body else would have seen them under the same circumstances: but there was a cause; you had been looking stedfastly at the sun?

MATILDA.

Yes, and for some time, till my eyes began to ache.

DR. HERBERT.

That was the cause. When we look intensely

for some time upon any very brilliant colour, we lose the perception of that, and become remarkably sensitive to another colour, which is called the complement, or accidental colour, of the first, being that which, added to or mixed with the first, would make white light; and if the looking be continued till the eyes are pained, the accidental colour is seen, whether it be present or not. All these are, however, no argument against the truth of our sensible perceptions, when the organs of sense are properly formed, and in their ordinary state of health. I once knew a family that had none of them the power of distinguishing colours; and yet they were a clever family. But their defect in this matter did not destroy the truth of the perception which other people have of colours, any more than the ignorance of the uneducated as to the mechanical and chemical properties of matter, tends to destroy the truths and the applications of those sciences, to persons that are conversant with them.

## CHARLES.

Where should the disposition in those philosophers, to whom you have alluded, to deny their own existence, and that of the external world, arise? They could not have seriously wished that either themselves, or the world, had been out of existence.

## DR. HERBERT.

I dare say they were just as fond of life, and of

all the enjoyments of life, as other people. But the grand source of error, in this, as in all other parts of the philosophy, both of the mind and of matter, appears to have been the desire of some supplemental knowledge for philosophers, even on the most common and obvious matters, in which those who were not philosophers should not be able to participate.

EDWARD.

As in the matter of a man's existence, they might want to give him two selves, that the one might prove the existence of the other.

DR. HERBERT.

That comes pretty near to it. In all matters of internal or intuitive belief, matters, the truth of which we find it the most difficult to doubt, they allowed what they called consciousness to be the evidence; but they came to the external world for their analogy, and maintained that the consciousness of the thought, or state of the mind, was something separate from the thought or state itself, just in the same manner that the evidence of an external event is something different from the event itself.

MARY.

Even I wonder at that. We can have no evidence of any event which we have not ourselves witnessed, either in the happening or in the con-

sequences, other than the evidence of those who tell us ; and we can have no evidence of what we perceive by the senses, but the impression on the senses themselves : so if the matter to be believed be a mere state of the mind, which no witness can see, and which none of the organs of sense can feel, what evidence can we get more than the mere feeling of the state, that is, the mere state itself ?

DR. HERBERT.

And yet, they not only erected consciousness into a separate power of the mind, quite distinct from the thought, the sensation, the feeling, or the state of mind, whatever it happened to be, simple or compound, but they divided this ideal consciousness into two separate powers : the one they called consciousness, or the intellectual sense, the office of which was to make us know what we thought and felt ; and the other they called conscience, or the moral sense, the office of which was to tell us whether what we thought, and felt, and resolved to do, was right or wrong.

CHARLES.

When we merely think, I do not see that there can be anything but the thought ; but in our sensations, such as in seeing, is there not the evidence of the eye, besides the knowledge of the mind ; or, when we hear, there is one knowledge of the sound, and another of that from which the sound proceeds ; as I may hear the sound of

music, and not know whether it be the sound of a piano-forte or a harp, till I have either seen the instrument, or listened to it for some time.

## DR. HERBERT.

Still, in this case, there is not, first, the perception of sound, together with the consciousness of that perception ; neither is there, afterwards, the perception of the sound of a harp, and the consciousness that it is the sound of that instrument : there are two perceptions, each standing in no need of any separate consciousness, to make you know it ; and there is a comparison of the sound produced, or the instrument producing it, with a former sound or a former instrument, the perception of which was in the memory ; and the sequence of the sound and the instrument, which you have learned by former experience, leads you to place them again in the same order of cause and effect.

## MARY.

Then in every case where we perceive, there is not the thing perceived, the perception, and consciousness—there is only the perception and the thing perceived.

## DR. HERBERT.

Precisely so ; and when the perception is merely a thought, without any external object acting upon the organs of sense, the perception and the thing

perceived are the same—that is, there is nothing but the perception.

EDWARD.

And when we remember, is there not memory and the thing remembered, besides the mere remembering of it? I remember the horse that was sold last year, and the thunder-storm that happened on Wednesday. Is that a proof that I have no memory, or that there was no horse and no thunder-storm?

DR. HERBERT.

Do you see the horse, or the lightning, or hear the roll of the thunder now?

EDWARD.

Certainly not.

DR. HERBERT.

Then if your power of remembering them were to be destroyed, and they had been the only horse and the only thunder-storm of which you ever had any knowledge, to what would your knowledge of them amount? Would you know a horse if you were to see one, or a thunder-storm if it were to take place?

EDWARD.

Of course I would not.

DR. HERBERT.

Then after you lost recollection of them, in what would your memory consist?

EDWARD.

In the other things which I might remember.

CHARLES.

Then, Edward, I think it is very evident, that the memory is nothing else than the state of the mind in remembering.

MARY.

And the remembrance of any thing has no existence, except when it forms the present thought—that is, when it is the existing state of the mind.

MATILDA.

But still it is curious how it comes, not only when we do not wish for it, but when we are trying to keep it back. I sometimes find that I cannot remember; but always when I try, I find that I cannot forget.

DR. HERBERT.

Then that is another proof that we have not recollection, as a separate power, to bring past feelings and perceptions to mind when we wish them, any more than we have consciousness as a power to put us in mind that we are perceiving

and remembering, or conscience, as a separate power, to warn us of the wrong that we are meditating to do, or coming to reprove us for what we have done. We have simply a mind, to question the existence of which would be an absurdity ; because the very act of questioning would be assuming the existence of what we questioned. This mind is not made up of any distinct powers or principles, for then it would be no mind at all, but a material substance ; but is known to us only by its successive states. Those states follow each other in the order of time, as antecedents and consequents, or causes and effects, just as the events of the external world. By experience, we find out the chains of those sequences ; and we have the power of comparing them together, so as to conclude that the consequent will follow the antecedent ; and thus, by altering, compounding, or remodelling the antecedents, we are enabled to conclude that we shall produce corresponding alterations upon the consequents. By those means, our experience becomes to us a rule and guide in our future conduct, just in the same manner as our experience in the events of the external world is a rule and guide to us in respect to them.

EDWARD.

But would it not have been better for us if we had known the nature of our own minds, in the same way as we know the mechanical and chemical properties of matter ?

DR. HERBERT.

That is impossible, from the very nature of the case, unless we adopt the experiment of the two minds, the one to think, and the other to watch it while thinking.

CHARLES.

But we can judge of the minds of others.

DR. HERBERT.

We can observe what others do, and we can examine what train of thought and impression would have led us to do the same; and from that we may imagine what had been their trains of thoughts and impressions antecedent to the observed action. If the experience, and habits, and circumstances of all men were the same, both as regarded their minds and the perfection and exercise of their bodily organs, we would have a probability of not being very far wrong; but as the differences of mankind, in habit and experience, and, for aught that we know, in the original construction of the organs of sense, and, probably, of the faculty of the mind itself as a thinking existence, are in the observed instances exceedingly various, and may be more so in those that we have not the means of observing, our comparisons in this way can never have the same certainty, as those which we derive from the study of our own trains of thought.

## MARY.

If we did not admit that conscience is a power of the mind, would not that tend to make us relaxed in our moral duties?

## DR. HERBERT.

Our errors will not be prevented by the use of a name, Mary, if there be not some reality to which that name is attached. If we know that certain painful feelings have always followed immediately or remotely from the performance of certain actions, or the formation of certain wishes, what want we more, or rather what more can we receive? If we are informed of the punishment—if we see it, what more would we have, what more can we have, to restrain us from the antecedent of which it is the invariable consequence?

## CHARLES.

That is surely all that is valuable in conscience, only it wants the name.

## DR. HERBERT.

And when the name would mislead us, Charles, we are always better without it; therefore the true wisdom lies in knowing the thing itself, and then the name is a matter of little moment. We must use the same names as those with whom we converse in the same language, only we need not, and ought not, to attach their erroneous meanings to them.

MARY.

Then consciousness is nothing more than the knowledge of our present perceptions, and of our past recollections.

DR. HERBERT.

It is not even that, Mary. It is not the knowledge of the state of mind ; it is those states themselves. Their existence is the knowledge of them. They cannot exist without being known ; and they cannot be known but when they exist, and where they exist. Leaving all the evidence that you have of the existence of the Chinese, and the non-existence of the Lilliputians, and also of the differences that are described in the real account of the one race, and the imaginary account of the other, tell me in what your perception of the former differs from that of the latter, as a state of your mind.

EDWARD.

The accounts are so different.

DR. HERBERT.

We have nothing to do with the accounts ; these are the evidence which we weigh in the balance of experience. The simple thought, without one other link in the chain of connexion, how does it differ in the two cases ?

EDWARD.

I can see no difference.

DR. HERBERT.

And the great fire in London, as to whether it happened in 1666 or 1766, or not at all, if you have the same story without any reference to the date, or the truth, or the falsehood ?

MATILDA.

It would be all the same.

DR. HERBERT.

Then do not those instances convince you that, in any single state of the mind, taken without reference to the chain of successions, to which we have found, by experience, that it belongs, and without any comparison with other states, there is merely the existence of the state, without any separate consciousness or knowledge of it, by which we are informed of its existence ; but that it is identical with our own existence at the time, and the belief of it is founded on the same unquestionable basis as our own existence, (which is identical with it at the time,)—the declaration of it that would be involved in the very denial ?

CHARLES.

But if, in the single and momentary states of mind, whether they be produced by present impressions on the senses, or arise in the memory, or be formed in new combinations, as men must do, when they invent, there be no consciousness or knowledge, beyond the mere state itself ; and if

that be identical—which means *the same* with our own existence—then how shall we know that, amid all the changes of our feelings, in our listlessness, and our thought, our joy, and our grief, our pleasure, and our pain, and all the countless variety of our mental phenomena, we are still the same identical beings?

DR. HERBERT.

You have put the objection well, Charles, and you have put it eloquently; but still out of the very ground of your objection we find the means of its overthrow,—a proof of our identity, which nothing can shake; but which rests upon the same foundation, and involves in the denial the same proof of its truth, as our existence itself. But we must take care not to lose ourselves, as abler reasoners have done, in a wilderness of words. You used the word “same,” and the word “identical;” did you mean that they were equivalent terms, the one of which might, in reference to the continuity of our existence, be used always instead of the other?

CHARLES.

I think they are equivalent.

DR. HERBERT.

The Thames in the hills of Gloucestershire, where you could jump across it, is not the *same*

as at London, where it at once floats thousands of vessels.

CHARLES.

No, it is not the same, certainly, for it is deeper and broader at the latter place.

DR. HERBERT.

But from the smallest rill that gets the name, to the estuary where it mingles with the ocean, is it not the continuous and identical Thames?

CHARLES.

It is the identical Thames, certainly, and not another river, to which we can give a new name, preserving the old one and the river of which it is the name.

DR. HERBERT.

And the water that forms the Thames—is that the *same* for two years in succession?

EDWARD.

No, not for two days, or at the same place for two hours.

DR. HERBERT.

Yet it is the identical Thames.

MARY.

It is not another river, certainly.

DR. HERBERT.

When it is foul with mud in a flood, and when free of it in dry weather, is it the *same* ; or would it be the *same* if its course were made as straight as a line, and its channel cased with polished marble ?

MATILDA.

It would not be the same in any case, but it would be the Thames in them both.

DR. HERBERT.

And none of us are the *same* now as when we were little children, and could not speak or go from one place to another, without being carried.

MARY.

I see it now. There can be an identity of existence, with endless varieties in the mode or state of that existence.

DR. HERBERT.

That is precisely it, Mary ; and because they would not see this very simple matter, they either doubted the identity of our existence, or wished to prove it by proving the sameness of our state, in which of course they failed, as it varies every moment.

EDWARD.

And how did they fall into that error?

DR. HERBERT.

That is a matter of much less importance than how we shall avoid it ourselves. But they probably erred a little in the subject itself, and a good deal more in the words they made use of. They confounded our mental identity, or our identity as existent, with our identity as *persons*, endowed with certain powers, and placed in certain circumstances ; and as the supposed powers, which are merely observed phenomena, vary in themselves, and are varied by the circumstances, they could not prove the identity of the compound being they called person, and in that they lost sight of or doubted the identity of the simple existence called mind.

CHARLES.

We can never doubt our identity ; we are conscious of it.

DR. HERBERT.

That was the rock upon which some of the wisest of them split. They took the consciousness of the moment, as apart from the state during the moment, to prove the momentary existence ; and they took the consciousness of the past recollections, as apart from the recollections themselves,

to prove the identity ; and between both, they had almost shuffled man out of his momentary existence as a sentient being, his continuity as an accountable one, and the indivisibility of his mind as an immortal one.

#### MARY.

They might as well have denied the identity of an instrument, because slow music is played at one time, and quick at another, and because it jars when not in tune.

#### DR. HERBERT.

One of the principal causes of error on this subject has unquestionably been the confounding of the mind with the body, and endeavouring to consider the whole man or person not only as identical in one continuous mental existence, but as having that identity extended to a sameness in his material frame, the particles of which are continually changing, in being wasted by use, and renewed with food. Now, even in the case of the body, though there be a constant change in the substance, so that after a certain period, of which we can of course never know the length, there may not be one particle in the frame that was in it at the beginning of the period, yet there is a continuous identity, which renders it just as impossible for us not to suppose that it is one body, as it is impossible for us to doubt the existence of the mind, or that in all the variety of its feelings and

thoughts, it should continue one and indivisible. The constant change of the matter, to which the mind is joined in that mysterious union which forms the life of the body, with a mind, of the substance of which as made up of parts, (which we have said is all that we can know of the nature of any substance as existing in space, and without reference to its successive phenomena in time,) they could know nothing, seems so to have puzzled them, that, in their attempts to explain, they attended first to one part of the compound, and then to the other.

CHARLES.

I do not think that the connexion of a simple and undecomposable mind, with a body, the substance of which is continually changing, is any more mysterious than the connexion of such a mind with a body, the particles of which would have remained the same during life.

EDWARD.

Or any more than a little black seed, which I put into the ground, should grow up into a large plant, and produce flowers and other seeds.

MARY.

Or than that I can lift my arm.

DR. HERBERT.

Of all matters that are unknown to us, it is

almost useless to say that our knowledge must be the same ; for all that we can say about them is, that we are, and must remain, alike ignorant of them : the nature of God, the way in which the stupendous frame of the universe arose at his will, the growth of a plant, the life and motions of an animal, why any event follows any other in the order which we, from experience, call cause and effect, are all equally difficult to our comprehension ; for this very plain reason, that they are all unknown, and, to our perceptions, all unknowable. If we will not believe in our own existence, or our own identity, unless we know the nature of mind, as abstract and apart from the phenomena, we ought to abstain from all the processes of the arts, and from taking our food ; for the unanswerable *why* comes in the same manner, and at the same stage of all inquiries. As far as our knowledge extends, it is day, and we can discriminate one thing from another, and talk accurately about agreement and disagreement, sameness and difference, identity and non-identity ; but if we attempt to pass beyond the boundary of knowledge, all is impenetrable darkness, and to our perception there is nothing, because we do not perceive at all.

## CHARLES.

But if we cannot make the very foundation of our knowledge plainer by reasoning, what is the use of reasoning at all ?

DR. HERBERT.

You may properly call it the foundation of our knowledge, Charles, for it is the line which draws the distinction between the fabric that man builds, by his experience and reasoning, and that in the construction of which man has no concern, and yet without which he could not build a single inch.

MATILDA.

It is in allusion to this, that we call those schemes and fancies that have no foundations, “ castles in the air.”

DR. HERBERT.

Yes, and every science that has not a foundation in this intuitive belief, is nothing but a castle in the air. All matters of simple belief, that is, all truths to which we cannot deny our assent, and yet cannot resolve into inferences from a comparison with truths formerly known, are considered as intuitive ; they are their own evidence ; can receive no other, and stand in need of no other ; and any attempt to prove them uniformly fails, because it involves that which cannot take place, making two or more of that which, in its nature, is only one. Those intuitive truths have a very great advantage over those that are founded upon reason and experience, because there can be no misunderstanding of them, there being no room for mistake or error.

## EDWARD.

Then if all our knowledge be founded on these intuitive truths, and if there can be no mistake or error in them, how can we err at all?

## DR. HERBERT.

For the very same reason, Edward, that a house may tumble—because we have not built it skilfully.

## CHARLES.

But the house may be well built, and yet fall, in consequence of the badness of the foundation.

## DR. HERBERT.

There is never any fault in the foundation; but we may lay on it a greater weight than it can bear; in other words, we may not choose it properly: but then the fault is in us, and not in the foundation. The very first thing that a skilful architect does, is to ascertain that the foundation which he chooses can support the structure that he intends to rear, and if he find it not solid enough for this at the apparent surface, he must dig down to the solid stratum.

## MARY.

I can see the application. Whenever we err, we build falsely, and make an application of cause and effect, which has not been proved by sufficient experience; or we build upon an improper founda-

tion, mistaking some result of reasoning, in which there is a fault, for the intuitive truth or belief, to which we should have dug down.

DR. HERBERT.

Yes; the mistaking of the truth of evidence and reasoning, for truths of intuition, has been the cause of many errors, and also the cause why some have denied the existence of intuitive truths themselves, and by that means attempted to destroy the foundation of all reasoning and belief.

CHARLES.

But in these cases, could they not have separated the testimony or the reasoning from the intuitive parts of the proposition?

DR. HERBERT.

Not without that process of reasoning which we may properly call a mental analysis. We have seen, already, that, however complex they may be in their causes, the states of the one indivisible mind are still in themselves one. None of you believe that calamities happen to men and nations, after an eclipse, which would not have happened if there had been no eclipse.

EDWARD.

Certainly not.

DR. HERBERT.

But you do not deny the happening of the eclipse itself?

EDWARD.

No; so far from that, I can tell with certainty when it is to happen, years or centuries before it does happen.

DR. HERBERT.

Then, you see, that in this very simple belief, the eclipse, and its consequent calamities, which to the mind of the believer in it is but one simple state of the mind, though the causes of it be compound, there is blended with the truth of the eclipse, the falsehood of the imputed consequences, and this destroys the truth of the whole state of mind of the believer, upon which the alarm that he feels is founded.

EDWARD.

But why should we not trace everything back to the intuitive belief, and then there could be no error at all?

DR. HERBERT.

By the very constitution of our nature, that is, by all that we feel in ourselves, or can observe in others, we prefer that which is our own to that which is not. The reasonings are of our own making, the intuitive belief is not; and, therefore,

we are in great danger of attending only to the reasoning, and neglecting the intuition, just as we repair and beautify our houses, without giving ourselves any trouble about that solid foundation upon which the lowest stone or pile is supported.

CHARLES.

But how shall we be able to distinguish this unerring intuition from our own reasonings, that may be false?

DR. HERBERT.

We can give no general definition, Charles; and, indeed, general definitions are only longer names, and of no great use, unless we examine the qualities and phenomena of the thing defined. But we cannot mistake it for reasoning, though we may and do mistake reasoning for it. "It is universal, immediate, and irresistible;" it cannot be made plainer by the longest description, or attributed to causes anterior to or simpler than itself; but, like the mind that believes it, it is in every instance indivisible—traceable in our comprehension to nothing anterior, and referable, as all incomprehensible matters are, to the Creator, or those trains of sequence by which he has been pleased to produce the phenomena of matter and of mind.

MARY.

Then we believe that we are, and are, through

life, the identical existences, amid all the changes of the matter of our bodies, and the states of our minds, just because we cannot help believing it?

DR. HERBERT.

Certainly; and the denial of the belief is equally a denial of the scepticism that denies it; as that too must either be an air-built castle, a combination of words without any meaning, or it must have its foundation on intuitive belief. This scepticism, as it relates to our continuous identity, is finely ridiculed in an anecdote in the “Memoirs of Martinus Scriblerus,” at which we have already laughed as a pleasant story, and to which you will soon be in a condition for returning with a higher pleasure, as the most admirable exposure of the folly of false philosophy that ever was produced by man. Do any of you know to what part of the Memoirs I allude?

EDWARD.

Sir John Cutler’s stockings, I suppose.

DR. HERBERT.

Yes. Can you repeat the story?

EDWARD.

“ Sir John Cutler had a pair of black worsted stockings, which his maid darned so oft with silk, that they became at last a pair of silk stockings.

Now, supposing those stockings of Sir John's endued with some degree of consciousness at every particular darning, they would have been sensible that they were the same individual pair of stockings, both before and after the darning ; and this sensation would have continued through all the succession of darnings : and yet after the last of all, there was not perhaps one thread left of the first pair of stockings, but they were grown to be silk stockings, as was said before."

CHARLES.

"The secretary of the freethinkers" was certainly in the right. The substance was not the same, but there was the continuous identity of the pair of stockings, which, from the frequent darning, I should suppose Sir John must have had on his legs every day.

EDWARD.

But the stockings had not the consciousness, and therefore could not know that they were the same pair.

MARY.

Nor would they, though they had continued black worsted, without any darning at all.

DR. HERBERT.

Then you perceive that there are among material things, several kinds of sameness and

identity, arising from the way in which we consider the things themselves. There is sameness of mass, with successive change of substance, as in the case of the stockings, or in a cask of ale after it has soured into vinegar ; sameness in one quality, as in all known qualities ; and identity, the thing itself, without any change of substance. Sameness in qualities can be determined by experiment, though the thing has been out of our sight ; but there is no proof of identity of mass, other than the continued presence of the thing identified. So that you see, even in the external world, absolute identity is the immediate result of intuitive belief—nothing but the belief of the existence of the thing, continued through a certain portion of our time.

CHARLES.

And mental identity is nothing more than the successive states of the mind, which are all that the mind knows of its own existence.

EDWARD.

Then if I were not to think at any time, would not that destroy the continuity of my identity ?

DR. HERBERT.

If it were possible that your thoughts could be seen by another person, and if they were the only indications that other persons had of the existence of your mind, the pauses between thought

and thought, if there were any, might appear to that person as chasms in the continuity of your mind's existence, because he himself must have been thinking during those pauses, otherwise he would not have perceived them. But our thoughts are not known to others ; and we, as we ourselves have seen, have no knowledge of them other than the very thoughts. Therefore, we can have no knowledge of any want of continuity—can take no note of time between thought and thought, and are in fact mentally nothing but when we are thinking. To us the measure of time or succession is the state of the mind only, and to suppose a pause or blank between one thought and another, would be but another name for the interpolation of a new thought between them.

CHARLES.

But if I forget that I thought of a particular subject, does it follow that I did not think of it ?

DR. HERBERT.

Some very able men, and Locke himself among the number, have entangled themselves in that question. The existence of the mind for the moment, is nothing other than the state of the mind for that moment ; and a past state which you cannot recal, is to you, for the moment, or even the life-time, just as much a non-existence as a future state, in which the mind has not been at all. The identity which is sought to be established,

is the identity of that ideal and confessedly variable power which we call memory, and not the identity of that mind which is always the same as existing, but may be in different states of existence, of which that which they call the power of memory, is nothing else than the mind in a state of remembering; and while the objection proceeds upon the very assumption that the identity which they wish to establish is not an identity but a diversity, the proof, if they could get it, would be of precisely the same kind as that by which Fluellen establishes the identity of Macedon and Monmouth—"There is a river in Macedon; and there is also moreover a river at Monmouth: it is called Wye at Monmouth; but it is out of my prains what is the name of the other river; but 'tis all one: 'tis so like as my fingers is to my fingers, and there is salmons in them poth."

EDWARD.

That is not any proof at all.

DR. HERBERT.

The absurdity of it is more striking, because the philosophical dramatist intended that it should be so; but the absurdity is not greater than when the gravest men, in the most solemn manner, and with the most earnest desire of arriving at the truth, institute comparisons between things which

are totally different, or of both or one of which they know nothing.

We have now, I trust, seen, in general terms, both what we have to study, and how we are to study it. We have considered the art of building—the mode in which we are to prosecute our inquiry ; we have dug down to the sure foundation—intuitive belief—that which we can neither deny nor render more simple by explanation and analysis ; and we have found out what are to be our materials—the various states, or phenomena, or affections of the mind ;—it, therefore, only remains for us to rear the structure.

Certain cautions are, however, necessary, to insure our doing that with success and stability. We must bear constantly in view, that our own mind is the source of all our materials ; and though we have no reason to doubt that the general laws of its phenomena are the same as those of the mind of others, we must be careful not to measure their extent by the extent of ours. For there may be many, we cannot tell how many, of our fellows, who, by longer and more successful study, may have been able to analyse opinions and beliefs which to us appear perfectly simple and intuitive, and to see diversity where we fancy that we have found sameness, or sameness where we have imagined that we have found variety. We must admit these to be our teachers in every case where we are convinced of the truth of their doc-

trines ; and we must also be prepared to alter our own opinions, when new knowledge renders that necessary. We must be equally on our guard against being dogmatical in our present opinions, so that we may not exclude the truth which experience would let in upon us, and against that restlessness after novelty by which we are in danger of leaving the truth which we possess for more showy and dazzling matters, of which the very gloss and glitter prevent our seeing the errors which they contain. We must yield to no authority, save our own conviction ; and, like dutiful subjects, we must instantly bow to that, though, like wise subjects, we must understand the nature and see the value of the decree, before we yield obedience to it. Above all, we must continue faithful to the free region of thought, and not allow ourselves to be overcome by the despotism of words.

## CHARLES.

If we were always to make ourselves so much masters of every subject that came before us, in the way of thought, as that we could know the whole truth, and nothing but the truth, respecting it, would not that prevent a great deal of disputing, and put an end to difference of opinion altogether ?

## DR. HERBERT.

That it would lessen the quantity of disputa-

tion is certain ; and, it is equally certain, that it would have some tendency to make the opinions of mankind more uniform than they are at present. But diversified as are the pursuits and experiences of men, there are very many subjects upon which it is hardly possible for two individuals to have the same opinion ; and, therefore, even when we think they are wrong, and try to correct them, we should be very tender of the opinions of others.

## CONVERSATION VI.

ARRANGEMENT OF INTELLECTUAL PHENOMENA.  
THE EXTERNAL AFFECTIONS.

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DR. HERBERT.

You of course know what is meant by a scientific arrangement?

CHARLES.

Forming the objects into particular classes, or into such a classification as shall tend to further the purposes of science.

DR. HERBERT.

Is it any part of the science of knowledge of those objects themselves?

EDWARD.

Certainly not, any more than the arranging of

the letters in the order of a, b, c, is any part of the knowledge of the letters, or the arranging of the books in the library, is the reading of them.

## MARY.

It is a little more than the order of a, b, c, Edward ; that is not a scientific arrangement, but a confusion ; there is no classification at all. Neither the letters that are similar in shape, nor those that are chiefly pronounced by the same organs of voice, are placed beside each other, so that the succession of the letters does not assist in knowing either their shapes or their sounds.

## MATILDA.

But there is more in the arrangement of the books, if they be properly arranged—that is, the French books all beside each other ; the poetry, the same ; and so of the other kinds.

## DR. HERBERT.

That is really a scientific arrangement, Matilda : first, because it can be formed only by one who understands the books ; and, secondly, because it enables the reader to find the kind of book, at least, that he wants. Would a person who could not read arrange the books in this way ?

## CHARLES.

Most likely such a person would place beside each other those that were most nearly equal in

size, and resembled each other the most in the binding.

EDWARD.

But that would still be a scientific arrangement, according to the science of the party, because one who could not read would know no likeness or difference in books, but their size, shape, and colour.

MARY.

In like manner, the Linnæan classification of plants is not made by those parts of them that are the most striking at first sight, as their general size and form, the size and shape of the leaves, the colour of the flowers, or any of their more obvious appearances; but from the *pistils* and *stamens*, little points and filaments in the centre of the flower, to which nobody but a botanist ever would pay the smallest attention.

CHARLES.

The same is the case in the zoological system of the same naturalist, where the whale is classed with quadrupeds, and the bat with man.

DR. HERBERT.

But still, though we are not warranted in saying that those are the best classifications that could be made, either of plants or of animals, yet they

have been very generally adopted, and the sciences have made more progress since their adoption than they made in any former period of the same length. Not all the individuals only that make up a class have some differences, but the individual is itself changed by time and circumstances ; so that all that we can obtain is the mere facility of finding that which we seek, and of knowing that it possesses the general quality from which the class is named. Classification, therefore, is not in itself science, to any very important extent ; and yet it is highly conducive to the acquisition of science, just as the division of science itself into historical and philosophical science, and the subdivision of these, as applicable to various classes of the objects of our inquiry, are conducive to the same purpose. If we had to seek the diamond in a mountain of sand, how much greater would be our labour than if we had to seek it only in a load ; and how much should we simplify that again, if we had to seek it only in a handful. It is this love of simplification which has led both to the classifications in science, and to that classification, by the use of general names, to which all mankind must probably have recourse. So convenient do we find it, and so much does it agree with that intuitive tendency of our nature which leads us to seek our object, whatever it may be, by the simplest and shortest road possible, that we are in danger of carrying it too far, and are never more in danger of being

obscure or wholly unintelligible than when we strain after excessive simplicity.

CHARLES.

But we are not making a system of intellectual philosophy ; and so, as the classification does not constitute the knowledge that we are in quest of, would it not answer our purpose just as well, if we took one of the systems that have been already made ? When we studied botany, we proceeded at once to the Linnæan system.

DR. HERBERT.

In botany, and the other sciences of matter, we had two separate subjects—the mind which examined, and the class or flower that it did examine. But in intellectual philosophy, the examined and the examiner are one; and, therefore, though a proper classification will not give us more knowledge than in any of the other sciences, an improper one may be more productive of errors. The qualities of material substances can be examined as they exist in space ; the qualities (if we may so use the expression) of the phenomena of the mind, can be found only in the future results to which they lead, or in the phenomena by which they were preceded. We can dissect a material substance with the knife, melt it in the crucible, or distil it in the retort ; but there is no knife, no crucible, no retort, by which we can separate

the parts of a thought:—we must go back to the thoughts consequent to which it arose, or forward to those to which experience has taught us that it is antecedent.

EDWARD.

Would not a very good first division be into thoughts that give pleasure, and thoughts that give pain?

CHARLES.

It would not include the whole, as there are many states, in which the mind is indifferent both to pleasure and pain.

MARY.

Nor between pleasure and pain should we be able to find a boundary. For if I hold my hand out at the window on a cold day, the cold pains me; when I draw it in, and shut the window, I feel neither pleasure nor pain; when I bring it near the fire, I feel pleasure; and if I bring it too near, or continue it too long, I feel pain again.

MATILDA.

It is something the same with the light of the sun. When we walk out on a fine day, and see the leaves and flowers glowing, and the moth glittering in the sun-beams, it is very delightful; but if we look, even for a short time, at the sun,

which is the source of all this beauty and pleasure, our eyes dazzle, and we feel pain.

## DR. HERBERT.

And there is, besides, pain and pleasure in the mind, although the body should at the same time feel indifferent, or seem the opposite. A man, racked by the most excruciating pain, may yet feel pleasure at the hearing of good news, such as that his malady is not mortal. So that, in the science of the mind, as well as in the science of matter, you see we must not be led away by that arrangement, which is perhaps the first that we make, and have some knowledge of, from the very moment of our birth.

## MARY.

Sometimes a thought comes into my mind when I am not wishing for it, and sometimes when I do wish. Does not that make a difference, which would do for two classes?

## CHARLES.

I should think not. When the thought comes without a wish before it, there is only one state of the mind ; but when there is first a wish, and then a thought following, there are two states ; besides, the thought may be in itself the same, whether you wish for it or not. If you think of a green field, or a rose, or in fact anything, the thought you have of it, if it be merely of the thing itself,

must be just the same whether you previously wished for it or not. If this were not the case—if the wish for a thing could alter the knowledge which we have of the thing, and which, as we have been told, is, to us, the thing itself—then we could be able to alter many things by wishing. A wish could shift a mountain as easily as a grain of sand.

DR. HERBERT.

A division of this kind has sometimes been adopted, by those who would have it that the mind is a compound of many principles. They divided what they called the powers of understanding and the powers of will.

EDWARD.

But I may think of that which I do not understand, and think of it, without any will or wish to do so; and that thought could not belong either to the understanding or the will.

MARY.

In like manner, if I thought what I wished, and understood what I thought, as I now do, voluntarily, that two and one make up three, it would belong both to the understanding and the will.

MATILDA.

And I sometimes feel happy, and at other times unhappy, without understanding why I should

feel so; and not merely without any will, but contrary to it: so that we could not make the classes of the understanding and the will, because, connected with the very same thought, we should sometimes have the one, sometimes the other, sometimes both, and sometimes neither.

DR. HERBERT.

You did well in using the word “connected,” Matilda; for the will or the understanding is another state of the mind, immediately preceding or following the thought, and connected with it in the order of succession—the only connection of thoughts that we can know.

EDWARD.

We might as well divide the other animals into beasts of the lion, and birds of the eagle.

MARY.

But we should want a good many other classes: fish of the dolphin, serpents of the viper, insects of the bee, and many more.

DR. HERBERT.

The error in this classification lay in classing the phenomena of the mind according to two of those phenomena themselves. What think you of the division into the intellectual powers and the active powers?

## CHARLES.

You have shown us, that the use of power or powers of the mind, as signifying anything but the states of the mind itself, is improper—a name corresponding to that in which there is no reality.

## DR. HERBERT.

Leave out the powers, then—what think you of the intellectual states and the active states?

## MARY.

They put me very much in mind of what you once told us about active and neuter verbs. They are both the names of states, only in the active verb two parties are referred to, and in the neuter, but one. The names of the intellectual states would be the neuter verbs of the mind, and the names of the active states, the active verbs.

## CHARLES.

With this difference from the common use of verbs, that the verb itself would be its own nominative.

## DR. HERBERT.

The difference in that respect is less than you suppose, Charles. The woodman is not the nominative in the felling of a tree, longer than he is actively employed in felling it; and so the mind

is not the nominative in any state after it passes into another.

EDWARD.

I think the mind must be active in any state of thought.

DR. HERBERT.

That is exactly my view of the subject ; and I think it the right one. Indeed any other view of it is productive of singular absurdity, and would make the mind of the man who acquires no knowledge more active than that of him who careers over the whole field of knowledge, and extends its boundaries on every side. They who have adopted this division, and they are among the most eminent men of modern times, make desire and aversion, and hope and fear, active powers ; while reasoning and imagination are classed among those that are merely intellectual. Hence it would follow, that they who sit with their arms folded, and torture themselves with those desires and passions that never, by any chance, ripen into action, and who never advance one step in the acquisition of knowledge, or add one iota to the useful arts, are not only more active than they who discover the properties of substances, and the laws of phenomena, and turn them to the augmentation of the beauty of the Fine, or the value of the Useful Arts ; but that they alone are active, while the men who have beautified and benefited the world are

merely contemplative or passive. The truth is, however, that when the mind thinks—when we have in its state any evidence of its existence—it is always active; and if it ever cease to do this (for of its so ceasing we can have no proof), it ceases to exist. Not only this, but the mind seems to be equally active in all its varied states. To it, the greatest and the least effort appear to be the same; the thought of an atom and that of a universe, are entertained in the same time, and leave the same exhaustion; and in the operation of the mind, there is not a jot more of fatigue in careering round the orbit of Saturn, than there is in measuring the circumference of a grain of sand. Be the mental occupation small or great, lowly or sublime, it is all the same to the mind.

## CHARLES.

Why then should we speak of the mind as being fatigued or exhausted by long and intense application to any particular subject, if all matters be alike easy to it?

## DR. HERBERT.

When we speak of the fatigue or exhaustion of the mind, we speak figuratively, as we do in most of our observations respecting it. We reason from the analogy of the external world; and, though we may name the mind, we really mean the body. The connexion between the organs of sense and that internal being, known only in its states and

phenomena, to which the senses are, as it were, the interpreters of the external world, is one of those subjects which must for ever lie beyond the power of human scrutiny, because we have no means of tracing its operation, any more than we have of knowing that mysterious sequence, by which one consequent event, rather than another, follows an antecedent one; but this we know, that as one of the senses becomes deadened by long and intense use of its organ, so the whole of the sentient faculties of the body become wearied by excessive study. This, however, can no more be attributed to the fatigue of the mind, than we can attribute the dimness of the eye and the dulness of the ear, which occur in old age, to any mental decay. It is impossible for us to understand why the eye sees, any more than the hand; or why the ear hears, any more than the feet: because we cannot discover how matter can convey any sort of intelligence to mind. But if we admit, (which we must either admit, or deny that of which the very denial involves an acknowledgement,) that the mind, in all its states, is one indivisible and unalterable existence; and admitting this, it is impossible for us to imagine that it can be fatigued or exhausted. Those are casualties that can happen only to a compound; and they can happen only in consequence of such an exhaustion of some of its component parts, as may be again replaced by the infusion of new matter, as the body is refreshed by food. This

unity, or rather *oneness*, of the mind, in its nature, and this unchangeableness of it through all its changing states, while they keep us clear of the errors into which they who regard it as a compound are almost sure to fall, very much narrow the division of its phenomena into that variety of arbitrary classes, which has given to the philosophy of mind a far more formidable and unintelligible appearance than it could by possibility assume, if it were studied as it is in reality, and not as it is expressed in words. All thoughts, or notions, or ideas, or whatever name we may give to those portions of our knowledge that we are unable to resolve into simpler portions, have this in common, that they are states of the mind; and, farther than this, we can, as mere states of the mind, tell nothing about them. How, then, shall we be able to make any arrangement, even into two classes?

## MARY.

It is very easy, I think. Our thoughts or states of mind, that are produced by, or follow immediately the presence of external objects, must be different from those that arise in the mind itself, without any reference to an external object, or when the object to which they refer is not present.

## DR. HERBERT.

That is the substance of the most general decision that we can make; and, if we do not carry

it too far, there can be no great objection to it. That the states of mind thus produced may be precisely the same, or different, or that the same or different states may be produced in each way, we must admit ; so that the division is not a division of the states of mind themselves, but a division of the modes in which they are produced.

EDWARD.

As the state of my mind, with regard to the knowledge of a tall man, riding a white horse, is just the same when I merely think of it, as when I actually see it.

DR. HERBERT.

Yes. As to the mind itself there can be no difference, though the presence of the object, and the affection of the organ of sense, be present in the one case, and wanting in the other. The affection of the mind occurs as instantly in the one case as in the other ; but though the state that follows external sensation, cannot be resolved, in reference to the mind itself, into the two separate parts of external sensation and inward consciousness : yet as the cause, or antecedent, is different in the two cases, that still makes a difference necessary in our mode of considering them. Thus we have two divisions of mental phenomena :—

1. The phenomena of *external perception*.
2. And the phenomena of *internal perception*.

The first of these arises immediately from the

presence of external objects ; the second arises in a way which we, perhaps, understand just as well, but about which we are unable to say so much, as we have no material organ or object—nothing that exists in time, about which to speak, and therefore it appears to be much more abstract than the other.

## CHARLES.

I think I understand the distinction. When I observe the mulberry tree upon the lawn—the tree, with its brown trunk, its large green leaves, and its dark purple berries—or, rather, as we were taught in optics, when the light that is reflected from these to my eye, produces some effect on that organ, instantaneously with which, or so immediately after it that I cannot distinguish between them, my mind is in that state which I call the perception, or the knowledge of a mulberry-tree actually before me at the time ; and this is a phenomenon, or state of the mind, arising from, or consequent to, external perception.

## DR. HERBERT.

That is nearly what is meant in the case of a perception by the sense of sight. Then what would you call an internal perception respecting the mulberry-tree ?

## MARY.

I may think how long it has taken to grow ;

what changes have occurred in the parish during the time ; how different it looks in summer and in winter ; how it once was a mulberry pip ; when it shall cease to grow ; or into what the timber of it shall be fashioned after the tree is cut down.

EDWARD.

Or that silk-worms are fed upon the leaves of mulberry-trees, and killed by scalding water, for the sake of the silk.

MATILDA.

And I may think how like or unlike our mulberry-tree may be to the mulberry-tree of Shakspeare ; and then I may think of Shakspeare himself and his plays, and Lady Macbeth, and poor Ophelia, and mad Lear.

EDWARD.

Or I can imagine a mulberry-tree ten times the height of ours.

MARY.

And one can think of our mulberry-tree itself, without any alteration, though one were at ever so great a distance from it.

DR. HERBERT.

These, and countless other thoughts, which the presence of the mulberry-tree, or the memory of

that presence, regarded as a state of mind, would produce, are all so many instances of the phenomena of internal perception ; and the number of them, you can easily see, depends on the other knowledge of the mind. One who had never been out of this parish, where no silk-worms are reared, or who had never read or heard of Shakspeare, and his mulberry-tree, would not, and could not, have had any perception of the silk, or Lady Macbeth, or Lear, by merely looking at a mulberry-tree. Those internal impressions, therefore, though they may have been first communicated by the senses, cannot in any respect be considered as existences in space, any more than there is a separate existence in space called an impression, or idea, besides the external object which acts upon the organ of sensation. In our next conversation we shall consider more at large the phenomena of external affection.

## CONVERSATION IX.

EXTERNAL AFFECTIONS—SENSATIONS—GENERAL  
SENSATION—THE CORPOREAL PROCESS—THE  
FIVE SENSES—EXAMINATION OF THOSE OF  
SMELL AND TASTE.

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DR. HERBERT.

Do any of you recollect what we purposed to converse about this time?

EDWARD.

The external affections of the mind; which are those states of the mind that arise along with, or so immediately consequent on, the presence of something external of the mind, that we have room for no other thought or state of mind between them.

DR. HERBERT.

Do you think that this class of affections of the

mind ever can arise *before* the external object be present to the organ of sense?

CHARLES.

Certainly not; but immediately after.

DR. HERBERT.

Then is there any harm in calling the presence of the external object the *cause* of the mental affection—in the sense in which we have defined cause, as the event by which any other event is immediately and invariably preceded?

MARY.

I think not. That is just what we mean by *cause*.

CHARLES.

Then our definitions of the external affections of the mind, will be those that have causes external of the mind.

EDWARD.

I think we should say *immediate* causes: for when I think of any particular object, such as the brown pony, my having seen that pony is the cause of my thinking of it, whether the pony be present at the time or not.

DR. HERBERT.

The pony is the pony, whether we see it or

not; but the cause of your thinking on it, is the previous state of your mind,—whether the sight of the pony, the wish to ride, or any thing else. All causes are immediate, the nearest event in time to the effect; so that “those which have external causes” will do for a short definition of the external affections. Now let us see how many may we have of acquiring them?

EDWARD.

We have five, and no more; arising from the five senses, of smell, taste, hearing, touching, and seeing; and these have all their particular organs.

DR. HERBERT.

Well, we shall allow that four of them have, and that without the organs of any one of these four, we could have no knowledge of those qualities of objects which are its particular province; but to what organ shall we confine the sense of touching?

EDWARD.

To the hand: if I can touch any thing, I can touch it with my fingers.

MATILDA.

And I with my elbow, or my foot.

CHARLES.

The whole surface of the body is one organ of touch.

EDWARD.

No; not the nails and the hair; they can be cut without any pain.

DR. HERBERT.

So can the papillæ of the palm or the fingers, if the instrument be keen enough, and we do not cut too deep; and a violent application to the hair, or the nails, is as painful as to the most sensitive part of the hand.

CHARLES.

But the skin feels immediately at the place where touched, while the feeling in the case of the hair or the nail takes place only at its insertion into the skin.

DR. HERBERT.

We cannot very well localize the feeling—that is to say, name the point of space, at which the sensation of the body is followed by the affection of the mind, because the succession is in time, and not in space, as we do not know any thing of the mind in space. But is the feeling confined to the surface of the body?

## CHARLES.

Certainly not ; I can feel the position of my arm, or my leg, without any thing external touching or disturbing it. I can feel the motion of the muscles, when I move them, though the limb in which they are inserted do not move ; and I can feel pain when nothing touches me, and when I do not move.

## EDWARD.

And I can feel hunger and thirst.

## DR. HERBERT.

Thus you see, that though we had enumerated the whole five senses, and attended, as carefully as we could attend, to all their operations, we should not have exhausted all the sources of our external perception ; for though man had been without these senses, and had not been susceptible of pain or pleasure from the contact of external objects—though he had been thus, as it were, without the world, there would still have been left to him some of the most agonising pains, and some of the most exquisite pleasures, that chequer his sensation ; and if his mind had been constituted in the same manner as at present, those pains and pleasures would have arisen from the presence of those derangements and restorations of the animal functions, which are, in the sense in which we have explained the word, their causes, and restrained in

trains of reflection, just in the same manner as the odours, and the tastes, and the sounds, and the colours, that are the objects of those senses that are confined to local organs. The information would no doubt have been confined; compared with what it is at present, this knowledge would not have been so varied, but it would have been knowledge still; and though man could have had no perception of the form even of his own body, he would still have had a science, and would have been able to number up his feelings, and his comparisons of them, just as we, through the medium of the senses, do those respecting the external world. In fact, he would have been in possession of all that strictly belongs to the philosophy of mind; for the various qualities of external objects, and the mechanical way in which these are supposed to act upon the organs of sense, belong not to the philosophy of mind, but to that of matter.

## MARY.

By what name should we call those affections of the mind that are produced without any allusion to the organs of sense, and that yet have causes external of the mind itself?

## DR. HERBERT.

To find an appropriate name for them is not so easy. If we were to invent one, nobody would understand it but ourselves; and of the names

that have been used, none are altogether unobjectionable, as they have been applied to other affections besides these.

CHARLES.

Are they not *feelings*?

DR. HERBERT.

No doubt they are, but the word has too wide a signification for being descriptive of them. *Feeling* has nearly the same signification with *finding*, which is used in place of it in some parts of the country ; and besides, in common language, it is used for internal affections of the mind, as well as for external ones. What we commonly call our feelings are those states of the mind consequent to perceptions, either external or internal, which are accompanied or instantly followed by pleasure or pain, and to which we give the name of emotions,—as when we see or think of anything, and either of these is followed by the thought that the possession of it would make us or others happy or miserable.

EDWARD.

We are sensible of them ; could we not, therefore, call them sensations ?

DR. HERBERT.

No doubt they are sensations ; but those who have written on the philosophy of the mind, have

been so much in the habit of confining the word sensations to those qualities and phenomena of the external world which we discover by the organs of sense, that, by the use of the word, we should be in danger of confounding the one with the other. They are, as it were, the senses for which there are no particular organs, and among them may be reckoned all derangements of the ordinary functions of life, whether the result be mere listlessness or *ennui*, or take the more definite form of absolute pain, the seat of which we can point out. The listlessness, the *ennui*, or the pain, we cannot attribute to the mind itself; for, independently of that being inconsistent with its very nature, we can trace them to some cause, that is, to some previous state of the body. We shall, however, have occasion to mention them more particularly when we come to examine the sense of touch—the sense to which they have the greatest resemblance, both in their diffusion over the body, and their influence upon the mind.

## MARY.

You have made use of the word *sensation* and the word *perception*, in speaking of the external affections of the mind, and I did not properly understand the difference between them. When I smell a rose, taste an apple, hear a nightingale, see a star, or touch a thorn, whether is that a sensation or a perception?

DR. HERBERT.

The affection itself, without any reference to the quality from which it proceeds, as if you felt it and knew not of the object or the quality itself, is properly a *sensation*; as it would be if you smelt a scent or heard a sound for the first time, you could not refer it to the rose or the nightingale; and it becomes a perception, when, from being familiar with it before, you so instantly refer it to the object or the quality, that the two states of the mind appear to be but one.

CHARLES.

The sensation then is consciousness of a state of the mind; the perception, consciousness of something external, which is the cause of that state.

DR. HERBERT.

Not exactly, Charles; the sensation is consciousness of the affection of the organ of sense; the perception, consciousness of the external object. The imaginary sound that rings in a disordered ear, or the mist that floats before a decayed eye, is just as much a sensation as the most perfect hearing, or the clearest vision; but neither the one nor the other is a perception, as there is nothing external of the organ.

EDWARD.

Then our organs of sense may deceive us?

## DR. HERBERT.

They may be altered as well as destroyed by disease; but as that has never been the case with the organs of the majority, these keep those of the minority right in matters of sensation. To the man with the jaundiced eye all objects are yellow; but he cannot persuade others of that, any more than the blind man can persuade them that there is no colour, the deaf man that there is no light, or the ignorant man that there is no knowledge.

## MARY.

Then the process of sensation, even when it is not accompanied by or changed into perception, is not perfectly simple: there is an external object, real or believed, a change in the organ, and an affection of the mind.

## CHARLES.

And the senses are not all the same in their power; some are sentient only when the organ is touched by the object, and some, though the object be at a distance greater than we can count. I do not hear the sound even of thunder or of a cannon, if it be more than a few miles distant: I cannot smell the strongest perfume, if the body that sends it be many yards off; and I cannot taste or touch without an actual contact of the object and the organ; but I can see a star at the

distance of probably more millions of miles than all the arithmeticians in Europe could reckon in a century.

## EDWARD.

Yes, and I can see the flash of a gun when fired at a distance before I hear the report, although the report must really be the first that happens ; and I can so measure the time between them, as to be enabled thence to calculate their distance from me with considerable precision. So that it should seem that some of our senses are so much more slow in their operation than others, that they actually change the order of events by making the former appear the latter, and the latter the former.

## DR. HERBERT.

And this objection involves its own answer in the very circumstance which enables you to compute the distance from a knowledge of the elapse of time. That has nothing to do with the immediateness of sensation in the organ, but all depends upon the different degrees of velocity with which that physical phenomenon which causes the change, arrives at the organ. Is your hand more sluggish in its sensation of heat when you put the end of a dry stick or a glass tube into the fire, than when you so place a metallic rod ?

## CHARLES.

Certainly not ; for that would make my sensation no state even of my own organs, but merely a consequence of the nature of external things.

## DR. HERBERT.

And so it is certainly with reference to the external object as a sensation, but not with regard to the organ in its sentient power, that is, in its fitness to receive the impression. The glass rod, you know, you could hold by the one extremity till the other were melted, and the stick till consumed within a short distance of your fingers ; while the metallic rod would become so hot that you could with difficulty hold it, before any remarkable change had taken place in the extremity of it which you had inserted in the fire.

## EDWARD.

These differences arise from the different facilities of conducting heat that belong to, and form part of the nature of the different substances that you have mentioned.

## DR. HERBERT.

Just in like manner the different substances which are the external causes of sensation by the different senses, are transferred, with greater or less velocity, from the object to the organ. Light, being physically the rarest of any of those that

are sensible at a distance from the object that immediately sends them to the organ, proceeds at the swiftest rate, and over the greatest distances. So swift indeed is its progress, that over any measurable distance its passage is, to common observation, instantaneous. Sound, which arises from the vibration of particles of matter, more solid and gross than those of light, proceeds slower, on the ordinary principles of physics. Smell, and taste, which do not appear to be attended with any motion at all, except the mere diffusion of the odorous particles in the one case, and the separation of the sapid ones in the other, demand what we call an immediate contact. As the particles by which smell is excited are perfectly inscrutable, we cannot form even a reasonable hypothesis as to the modes of their action ; but the resisting particles, in touch, and in all those affections which are usually ascribed to it as a single sense, have some resemblance to the resistance of bodies in mechanical pressure or collision ; and the action of those particles which affect the organs of taste, seem to be accompanied with more or less of a chemical decomposition in the body tasted.

## CHARLES.

In the whole of these sensations, varied in the different organs, and again, in the different ways by which those organs are affected by different substances, the brain is considered as the ultimate

organ of sensation, to which the sensations are conveyed along the nerves, from those ramifications of the latter that are thickly spread over the immediate organ of the sense.

DR. HERBERT.

Such is the common theory ; but it is a theory that can never be verified by facts, as we lose sensation even before we begin to dissect for it.

CHARLES.

But I have read that if the nerve, connecting any organ or member of the body with the brain, be divided, or violently compressed, or in a state of disease, that organ loses its sensation, and that limb its sensibility.

DR. HERBERT.

That is true ; and so delicate is the mechanism of the sentient structure, as contributing to sensation, that all sense of touch and all power of motion may be destroyed in a palsied limb ; while, upon dissection, no visible change of the nervous arrangement can be at all detected. In those that have not the power of smell, no difference has been found in the olfactory nerves ; and in cases of *gutta serena*, where sight is completely destroyed, not by any visible injury to the external mechanism of the eye, but by a destruction of the optic nerve, the substance of that nerve does not appear to be altered. Thus, from all that we can

discover, it does not appear whether the ultimate seat of sensation be in that central mass of the nervous system which we call the brain, or in the portion that comes immediately in contact with the external object, whose presence is the cause of sensation.

## MARY.

Why, then, should we be in the habit of estimating the mental powers by the supposed quantity of this central mass ; and imputing different degrees of capacity, as well as different habits and propensities, to its having one form rather than another ?

## DR. HERBERT.

This inquiry, like others, is open to observation ; and if we find that a certain form, even in the external structure of the head, is invariably accompanied by certain abilities and dispositions, we can no more dissent from them, as standing in the relation of cause and effect, than we can dissent from the same relation in any other two phenomena which we find in immediate and invariable sequence.

## MATILDA.

If then, the phrenologists could but make their experience extensive enough, they would establish that science upon as sure a basis as any other of the sciences.

DR. HERBERT.

No question they would ; but the difficulty is in making the experiments. These are necessarily confined to a very limited number of individuals as compared with the whole ; and they are necessarily vague in themselves—there being no more reason to attribute the observed faculty or disposition to the protuberance at any one place, than to the surrounding depression by which that protuberance is rendered perceptible. We have no evidence that any one perception of the senses, or any one affection of the mind, is connected, either with the whole brain, or with any portion of it, as distinguished from the rest of the nervous mass, which is diffused through the body till it end in filaments too fine for our nicest observation. Let us take a very simple case. In closing one's hand, where is it that you are able to trace any thing of the antecedent thought and the consequent act ? Is it in the brain, in the hand, or in the nerves connecting the brain with the hand ?

EDWARD.

It is in the hand only that I can either see or feel it. If I had not been told, I should have known nothing about the brain, or the nerves either : and, even now, I know it only as matter of hearsay ; for I never saw or felt them, or was in any way conscious of their existence.

## DR. HERBERT.

Thus you see that, in any of the sensations, to whatever sense they may be referred, our absolute knowledge stops at the organ of sense. If that be deranged, the effect is precisely the same as if no sentient body were present ; but farther than this, our inquiries have not been able to penetrate ; and, therefore, one hypothesis is just as good as another ; for it is a good maxim in philosophy, that where nothing can be affirmed, nothing can be denied. There have been those, however, who have made as complete systems of nervous action, as ever they did of demonology, or the music of the spheres. Some have attributed the whole process to vibrations of the nerves, sent from the surface to the central mass ; without ever considering how different the nerves are, in their structure, from any other substance in which we have perceived such vibrations. They have forgotten, too, that if sensations were merely mechanical vibrations, propagated in this manner, there would be little chance of the same sort of vibration being conveyed to the central mass of the brain, which was originally given to the slender filaments of the external nerves. In a common musical instrument, we do not get the same sounds from slender strings as from thick ones ; neither do we get the same from those that are short as from those that are long. Upon this hypothesis, sound and sight should have more short and rapid vibrations as compared with smell ; and a gout in the toe should

be far more grave than a pain in the head, because the nerves connecting it with the central mass are longer.

MARY.

I do not see that these precautions are absolutely necessary, because the belief itself is of such a nature as that one is in little danger of falling into it.

DR. HERBERT.

Whenever we are on the confines of matter and mind, we are never altogether free from danger. Many of the words which we are compelled to use as expressive of the phenomena of the one, being the names also of the phenomena of the other, we are in danger not only of confounding the individual phenomena, but becoming materialists with regard to the mind, in the midst of our most laboured arguments for its immaterial nature. Besides, when we confine our inquiries into any of the senses, to the observable phenomena of that, we are on safer ground, and we quit that ground whenever we attempt to connect the sensation of any of the organs of the senses with any thing intermediate between it and the instantly-consequent mental affection. If there were a process of transmission, it would take some time, however short, and we should not have that instantaneous knowledge of touch, in any sensitive part of the body, which is matter of daily experience. All that

we can know about the matter is, that there must be some change in the state of the sentient organ, immediately consequent upon the presence of the object; but, instead of following it into the hidden chambers of life and thought, and knowing how it is borne onward and how received, we do not know any thing about the change, farther than that it is an invariable consequent of the healthy state of the organ, and the presence of the object.

CHARLES.

But still it is singular that a distant object, such as the sun in the sky, or the bell in the steeple, should produce a change of state in our organs of sense.

DR. HERBERT.

It is wonderful, certainly, but it is not singular, for the whole of nature is made up of such mysteries, and the sequence of one antecedent and consequent is just as inscrutable to us as another. That any one substance can be the cause of a change in any other, when separated to a distance in space, is, however, an assumption of the same kind, and leads to the same errors, as the supposition that there can be a pause in time, or of succession, between the cause and the effect. When we make those pauses between one reality and another, we cannot help filling them up with something that is imaginary; and as the imaginary pauses between the antecedent and consequent

event and sequence, have been filled up by imaginary matters, to which the names of power and “necessary connexion” have been given ; so the pauses and distances which we make between the sentient organ, and that which we consider to be its object, have been filled up by those imaginary creations of man, images and ideas, and other incomprehensible *spectra* of things, which have, when followed out by the sceptics, or even by those who wished not to be sceptics, led many otherwise intelligent men to ascribe the same imaginary nature to that which really exists. Let me ask you, if it would alter the distinction of the sensation if the communication between it and the organ were cut off close by the object, or close to the organ itself ?

## MARY.

It certainly would make no difference : a board interposed between my eye and the window, if it covered all the window, would be the same, in effect, as to my looking out, whether it were close to the eye, or immediately in contact with the glass.

## EDWARD.

And I should think that an exhausted receiver, placed over my head, would as effectually prevent me from hearing the tinkle of the bell, as when the bell itself is within the receiver, and I am in the open air.

## DR. HERBERT.

There is not the least doubt of it. The light which gives us the sensation of vision, the undulations which give us that of sound, and all the other *media* of the senses (and they are improperly called *media*, for they, and they alone, are the objects of sense), must make a direct impression upon the organ ; and if the impression upon the organ be the same in any two instances, it matters not what may be the difference of the objects to which we can trace the sentient particles that act upon the organ. The smell of a rose, in rose-water, is not, by the sense of smelling alone, to be distinguished from that in the flower ; neither is the sound of a cannon, if it be as loud, and as often reverberated, at all distinguishable by the ear from the sound of thunder. Therefore, it is apparent, that the sensation has no necessary connexion with the body or substance that we are said to perceive, but is a consequence of our former experience of the co-existence of such a sensation and such an object. If we were to smell at rose-water for ever, we would never be able to arrive at a single property of the rose, as seen, or as handled ; and the sound of thunder certainly never led mankind to the invention of fire-arms. Thus you see that, even in those cases where we think the perception of the sense does it all, that would be both feeble and useless, were it not that we can mingle it with our experi-

mental knowledge ; nor is there a single object, or event, in the external world, or a single affection of the mind, that we can in any way explain but by another, either as similar in its momentary properties, or as similarly situated in the succession of cause and effect. All, therefore, that Nature has given us is the faculty of acquiring knowledge, and objects of which we may have it ; and when we cease to experiment, either in outward observation or in inward comparison, we cease to learn, and are not only idle, but in error.

MARY.

Is not the sense of smell the simplest of our senses ?

EDWARD.

That is not easy to say, unless you tell us what you mean by simple.

MARY.

I mean the one that gives us the most limited and the least complicated information.

DR. HERBERT.

In this view of the matter, certainly, it is ; for it could convey to us none of those portions of information which make us acquainted with the properties, or even with the existence of external bodies. We speak of the odours of certain sub-

stances : but, as I have already said, we cannot certainly infer the presence of the substance from the present sensation of the odour, even though we have been long accustomed to see or feel the one at the same time that we smell the other. You may find the perfumes of a thousand flowers, in a thousand bottles, in a perfumer's shop ; and yet there may not be a single flower within miles of it. The whole matter discoverable by us in the exercise of this sense is, that the interior membrane of the nostrils, upon which what we call the olfactory or smelling nerves are spread out, is affected in a particular manner ; and we infer that the matter which thus affects them is mingled with the air that we breathe, just because the strength of the sensation is increased or diminished with the increase or the diminution of respiration.

## MATILDA.

But may not an odour be compound ? If I tie together a nosegay of several flowers, as of roses, sweet peas, and mignonette, and hold it at some distance from me, the smell is not that of any of the three, but a compound of them altogether.

## DR. HERBERT.

But it is a compound which we have no means of analysing by the mere sense of smell, unless one of the flowers so predominate as to give its scent to the whole ; and then we cannot name the

accompanying flower, unless we have previously smelt the same combination, and at the same time ascertained that the presence of that was necessary to the present sensation.

## CHARLES.

In this respect, man is far inferior to many of the other animals. The hound courses upon the scent, and the blood-hound on the slot, where nothing is perceptible to the utmost refinement of human research; and dogs have been known to find their way by the scent, backwards, over many miles, even hundreds of miles, where they were in close carriages during their former journey, and could not, by possibility, have had a single object of sight to guide them on their return.

## DR. HERBERT.

The senses of the animals, which are given to them for their preservation almost immediately at their birth, are formed in a state of perfection: while those of man, who is to be nursed in his helpless years, and instructed afterwards in his organs of sense, as well as in everything else, has them in a state of extreme feebleness; but when they are once educated, they answer his purposes much better than the naturally more acute senses of the other animals. It is true we cannot track game, or follow a man, or find out a place, by the mere sense of smelling, if that place be at any distance from us, and there be no current of air

wafting the odorous particles, by which smelling can guide us ; but still, compared with our other senses, or, rather, after the experience of their operation, our feeble sense of smelling can guide us to information, at which none of the other animals could arrive. The scent of a dog enables him to find his home, his feeder, or his food—all the objects in which he is interested ; but we have no reason to conclude that, with all his acuteness, he could make any distinction between a rose and a tulip. This shows us, that a teachable faculty, however feeble it may be at its commencement, is far better than even the most acute faculty, if it cannot be taught.

## MARY.

I think the sense of taste is one from which, next to smell, we derive the least information.

## EDWARD.

I differ from you there. We derive a great deal of very useful and pleasant information from the sense of taste. All the nice fruits and sweet-meats are distinguished by the taste ; and if there was not something more pleasing in the tastes of pine-apples, and grapes, and peaches, than in apples and potatoes, it would be all orchards and fields, and no hot-houses.

## DR. HERBERT.

That the pleasures we derive from taste are

very numerous, I readily admit. That they are agreeable to us all, we cannot deny; and that if they were struck out of the catalogue of sensations, there are very many whose enjoyments would be sadly abridged, I fear I must allow. But those pleasures are treacherous as pleasures; and if we do not mingle the enjoyment of them with something more intellectual than anything which they themselves could furnish, we would not only have small claims to the character of rational and informed beings, but injure our existence as mere animals. It is perhaps here that our cultivated senses have the least advantage over the instinctive ones of the animals. It is probable, that the pleasure of taste is the most general of their pleasures: and yet we do not find that they become the victims of dainties, as is but too often the case with man.

## CHARLES.

In the case of tasting, there appears to me to be something more than in that of smelling. There is a sensation of the presence of the substance tasted.

## DR. HERBERT.

That seems doubtful, Charles. When we take a substance into the mouth, the chief seat of the organ of taste, mere tasting, the mere sapidity, is not the only sensation that arises. There is a feeling of the existence of the body, by touch, by

pressure, more or less, upon the tongue and palate, so intimately accompanying the mere taste, that we can hardly separate the one from the other: but still they are not the same; the one is, as I have said, analogous to a mechanical pressure or resistance, and the other to a chemical decomposition; and it is doubtful whether any sensation of taste would arise, unless from a decomposition of the sapid substance to a certain extent; so that if we had had no sense but that of mere taste, it is doubtful whether we could have acquired any certain knowledge of external existences: and certainly we could have known none of their properties, except their sapid ones.

## CHARLES.

Then, as the sense of taste conveys so much individual pleasure to us, are we to consider that its value is confined to that; and that it has no influence upon man in a state of education and society?

## DR. HERBERT.

So far from that being the case, Charles, it is this very sense which, when turned to a proper account, tends more to promote kindly feelings, between those who are on an equality, and sympathy for those who want, than even the most intellectual of our other affections, external or internal. Its recurrence is at the table, where we all meet; it is a pleasure in which we all partake;

and mankind must be depraved, indeed, if a number of them can meet together, and all be happy, without some wish, not for the happiness of those who are assembled merely, but for the happiness of all the rest. The social meal is the period at which, both by nature and by religion, we think of the bounty of our Creator ; and, so thinking, it is surely the fittest time for remembering the wants of our fellow-creatures—for thinking of the case of those who toil hard, and yet are hungry, while we follow our pleasures, and yet fare abundantly. Nor is there any doubt that the remembrance of the blessed founder of our religion was coupled with the particular act of the gratification of this sense, in order that, by remembering his unspeakable mercy to us, we might learn to be merciful to others.

## CONVERSATION X.

HEARING—LIMIT OF EXTERNAL SENSATION—  
MUSIC—LANGUAGE.

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DR. HERBERT.

THE order in which we class the senses is, of course, of little importance, as, with the exception of some confusion, which erroneous views of both have introduced into the explanations of those perceptions of external things that we derive, or are by them supposed to derive, exclusively from the touch or from vision, as immediate sensations, and not as inferences from experience, there is nothing in the one sense which leads us more naturally to one than to another of the others. Therefore, we shall next consider the sense of hearing. Is the information with which it furnishes us, in the first instance—that is, in a single and un-repeated sound—of more importance, or more

fraught with information, than a single instance of smell or taste?

MATILDA.

I think it is. There is a charm in a musical note which conveys a pleasure different from any that we can have from the sweetest scent, or the most delicious flavour.

EDWARD.

I should doubt that ; for I would prefer a nice ripe strawberry, fresh from the plant, to any single musical note that I ever heard or could hear.

CHARLES.

And, I am sure, when I walk out in the freshness of the spring, I cannot tell whether I derive the most pleasure from the fragrance of the blossoms or the songs of the birds.

DR. HERBERT.

But do you think that you would be better able to come at a knowledge of the birds from their notes, without having seen them, than you would at a knowledge of the blossoms from their mere fragrance?

MARY.

They must have been seen first, certainly, and heard singing at the same time. Indeed, all the senses, of which we have yet spoken, seem to me,

if they are not accompanied by the experience of the other senses, to convey nothing but the mere sensation of smell, or taste, or sound, which may be agreeable or disagreeable to us, and is felt to be so, without any other reference to the substance from which we suppose that it arises.

DR. HERBERT.

And do you think that the sense of sound, which still does not, in itself, convey any information of external existences, is fraught with no other information than that of the mere individual sounds themselves ?

MARY.

When the sounds are skilfully arranged, so as to produce a piece of music, that music may produce the most powerful impression upon the mind, and have an influence, not only upon the immediate conduct, but upon the general character. We have read of the Swiss being won back to their native mountains by the sound of the airs to which they were accustomed to listen there; we have read of armies having been rallied by the sound of their favourite music, when the command of their general had lost its power; we have read of the sailor overcoming the perils of the deep, cheered even by his own song during a storm; and we have all felt that, not in the sounds of music or in the songs of the human voice only, but in the rustling of the leaves, the

rushing of the waters, the moaning of the winds, the roaring of the thunder, and in every sound, from whatever it arises, or however it is pitched and modulated, there is an effect upon the feelings of which we have no trace in any perception, either of smell or of taste. Smell and taste are, in themselves, mere solitary or selfish pleasures ; but in the pleasures of sound, we sympathise with all nature.

CHARLES.

One of the most remarkable circumstances about sound, or the sense of hearing, is the extremely minute variations of it which are clearly and at once discernible. All roses have pretty nearly the same scent ; and from the same tree you cannot, by that sense, distinguish one from another, if they be in the same stage of growth. All pieces of sugar, if equally free from extraneous matter, have the same sweetness, and an ounce, in its continued application, would certainly be at the end more sweet than a pound. Sounds, on the other hand, admit of endless diversity ; no two notes are the same on one instrument ; no single note is the same when the atmosphere is dry as when it is damp ; no one note is the same on any two instruments ; no two human voices are alike ; and no one human voice preserves exactly the same sound, when expressing even the shortest word or sentence, if the feeling and application of it be not exactly similar. Nay, so very variable is that which produces sound, be it voice or instru-

ment, and so susceptible is the ear to those variations, that not only the people in different countries, but those who are differently occupied, or differently exposed to the weather, do not pronounce the words of the very same language, as mere sounds, (without any reference to their signification,) so as to produce the same effect upon the ear.

## DR. HERBERT.

As we are apt, from observation, to associate a complication of effect with a complication of cause, we should be led from the anatomical structure of the ear, as compared with that of the organs of smell and taste, to infer a much greater variety in the sensations of which it is susceptible. Of all our organs of allocated sense, the ear is certainly the most intricate in its structure. Its parts are the most numerous, and the least analogous in their offices, to any thing we meet with in external mechanics. The organs of smell and taste are mere surfaces, which have another, and, as would appear, a more important use in the animal economy. The indispensable office of respiration, the less continuous one of receiving food, which is equally important, and the powers of voice, which are, in an intellectual point of view, the most important of any, are in great part allocated to the very same organs as smell and taste ; while the ear, with all its singular machinery, answers no purpose but that of hearing.

## MARY.

The eye I should reckon a nicer and more complicated organ than the ear ; it is more beautiful, and it expresses the internal feelings of the mind, of which there is not a trace to be found in the ear, which, in human beings at least, is quite motionless.

## EDWARD.

Nor is the ear absolutely necessary for the transmission of sound. I have read of those who have retained their hearing after the loss of the external ear ; and I know that if the mouth be kept open, sounds can be heard though both ears be shut.

## CHARLES.

And not only that, but, in some cases, a particular sound is more loud and sonorous when the ears are shut, than when they are open. If I fasten a bit of string to the poker, take the end of the string between my teeth, and thus suspending the poker, hit the other end of it against a hard body, as the fender, I can hear the sound a great deal better when my ears are closed, than when they are open.

## DR. HERBERT.

These instances only shew that the cause of hearing,—that is, the change in the external world, immediately antecedent to that change in the state

of the auric nerves within the ear, which is instantly followed by the mental consciousness of sound, is not only not remote—as the bell which is swung in the steeple or the bird which sings in the grove,—but is nearer to us—in more absolute contact with those nerves—than the external ear, or than a great part of the internal cavity. For, as you have observed, the vibrations of the poker and the cord, when communicated to the teeth, and thence to the air in the mouth, produce a louder sound when the auditory passage is shut than when it is open. Now, there are communicating ducts that lead from the mouth to very near the cavity of the internal ear; and these, in the case alluded to, are no doubt the channels of sound.

#### MATILDA.

But why should the sound be louder, in the case alluded to, when the ears are shut, than when they are open?

#### DR. HERBERT.

The ear is adapted to receive sounds from all quarters—from every point of surrounding space; and as there is always something in motion, and causing pulsations in the air, a number of sounds must be constantly assailing us, though from habit we do not heed them, unless when one more powerful than the rest forces itself upon the organ. Now, in the case alluded to, these sounds are par-

tially excluded by the closing of the ears, and the particular sound that has, as it were, an unbroken connexion with the internal ear, is left to produce its effect undisturbed.

CHARLES.

That seems at variance with another fact. The country people always open their mouths when they are listening eagerly to any particular sound ; and I have often done the same, and felt considerable advantage from it.

MARY.

You forget, Charles, that it is the ear and not the mouth which collects sounds from all quarters. When we listen open-mouthed, we always turn our faces in the direction from which the sound comes ; and thus we get an increase of that particular sound, without any increase of the other disturbing sounds that are around us.

MATILDA.

Yes, and that sound must have been loud enough to overcome all these, before we began to listen to it.

EDWARD.

If sound be produced only by the pulsation or vibration of the air, or other body, that is immediately in contact with the internal ear, how comes it that we can know the point from which

sound proceeds? If I hear a lamb bleat in the field, a bird sing in a tree, or a bee humming over a flower, I can go to the place where it is without any guide but the sound alone.

CHARLES.

No, you cannot. Do you not remember the echo at the great rock? You stood at the point where the echo is loudest. I came up behind the bushes, and called "Ned," and you went to the rock to seek me.

EDWARD.

But I did not hear you. I heard the echo, and that came from the rock.

MARY.

Not originally, Edward; the echo never begins the conversation: it never speaks till it be spoken to.

DR. HERBERT.

In the mere sound itself there is certainly nothing to guide us to the knowledge of direction, or distance, or of a sounding body. The mere sensation of sound is all that the momentary action of the organ gives us; and if we had never been sensible of anything but that, instead of having any knowledge of external objects, we should not have known that we had bodies at all; at least they would have been the whole universe

to us, and we would have had no knowledge of them, further than the pains or the pleasures that arose from the changes of their states at any particular point, and for any particular time that they had been in a state of change. Would a pain in the limb, or the stomach, or even in the brain itself, or the pleasure that is felt when the pain suddenly ceases, and the part returns to its wonted state of health, give you a lesson in geography or astronomy, or even enable you to find out that you had hands or feet ?

CHARLES.

Certainly not; it would not give one a lesson even in the anatomy of the part affected.

DR. HERBERT.

And yet the affections to which I have alluded are, in themselves, much more acute, and therefore much better calculated for conveying more knowledge than the mere facts of their own occurrence, than any ordinary sounds which we can hear.

EDWARD.

Then, if our senses give us no information, what is the use of them ?

DR. HERBERT.

They give us sensation, Edward, or rather they are themselves known to us only in sensation ; for

they do not give us any knowledge even of their own organs. If we had had no sense but that of sight, for instance, and if the impressions or affections of the organ of that sense, produced by the various modifications of light, had been as transient in the mind as they are in the optic nerves upon the retina, or in whatever other place of the sentient mass the sensation of sight arises, we might have enjoyed the very same sense of sight that we enjoy now, and have enjoyed it for any number of years, without having the slightest knowledge of body, or extension, or duration. We would have been beings of the moment only, and the perceptions of sight would have been nothing more than momentary pleasures and pains, analogous to those that we feel in the healthy or the diseased states of our internal organs,—of those organs which, with all our senses, and all our powers of continued observation and comparison, we could have had no knowledge, if the body had never been dissected.

CHARLES.

Then the sensation is a mere state of the organs, beyond which, as a pleasure or a pain, we never could have had any knowledge, if we had had nothing else than the sensation.

DR. HERBERT.

That certainly is all.

## MARY.

And yet the senses are the original means by which we come at our knowledge of all the properties of external objects.

## DR. HERBERT.

We have no other means of acquiring any knowledge whatever of anything, as *existing in space*—that is, for the moment, and without looking back, or making trial forward.

## EDWARD.

Then we know nothing whatever.

## DR. HERBERT.

When we come honestly to that point, Edward, without deceiving ourselves, we are farther advanced in the path of true knowledge than they who have filled the shelves of the library with books upon this very philosophy of the mind, about which we have been conversing for some time, and in which I was aware that we should come to this conclusion sooner or later. It is fortunate that we have come to it here. We have said enough, I trust, about the simpler senses to understand the extent and limits of the information that they give us; and that will enable us to restore to its proper source the other and more extended information which has been attributed to the remaining senses of touch and vision.

## CHARLES.

But if we deny that the senses give us our information relative to the external world, would not that at once destroy philosophy and religion, and reduce the world, the universe, ourselves, and all, to mere dreams and imaginations?

## DR. HERBERT.

Instead of that, Charles, it establishes them all, upon a foundation which is the only sure one, and one which cannot be shaken by argument, or undermined by sophistry. But, in order that we may be the better able to see, and to bear in mind, the point at which the truth begins, let me call your attention carefully to one very short question:— “If we had had but one sense, as that of hearing, and one sensation from it, as one note of a bugle, once sounded, but never repeated; would we have been better or worse qualified for acquiring knowledge by that sense, than we are with all our senses, all our experience, all our reasoning?”

## MARY.

In that case, the universe, to us, would have been but one bugle note.

## DR. HERBERT.

Then, if the note had ceased; the sense of hearing been extinguished, never to return; and the taste of a peach had been as momentarily im-

pressed upon our sense of taste; how should have stood our knowledge?

EDWARD.

The world would have been, to us, the momentary taste of a peach, and nothing else.

DR. HERBERT.

Again: if that had passed in like manner, and the sense of smell had been impressed by the momentary odour of a violet?

MATILDA.

The odour of a violet would have been all.

DR. HERBERT.

If that had passed also, and we had got one momentary glance of the colour of a rose?

CHARLES.

The colour of the rose would have been all we knew.

DR. HERBERT.

That also having been destroyed, if the finger had been pricked by the point of a needle?

MARY.

The world would have been a needle's point.

DR. HERBERT.

If there had been no external sensation, but only one twinge of inward pain?

CHARLES.

The whole would, of course, have been one momentary feeling of pain.

DR. HERBERT.

Thus we have enumerated all the senses, and have found that in one operation of each of them, singly, the only knowledge that we could by possibility obtain, is the mere sensation itself.

EDWARD.

But if I had felt any of them once, I should know it again if it returned,—at least, if I recollect the former time.

DR. HERBERT.

Then you observe, that the senses, in their individual operations (and they are nothing but these), give us the individual sensation only; and that these are not knowledge, unless the mind perceives them in succession, decides upon their sameness or diversity, and observes them in the order of their occurrence. So that it is not by the senses, considered in their organs, that the state of external things which put these organs into particular states, that our knowledge of matter is originally received; for the very facts of the existence of the affected organ,

the affecting cause, and the sequence to which the name of cause and effect is given, are deductions of experience, the results of internal affections of the mind ; and without those affections, though the substances and occurrences in the external world had been just the same as they are now, we should have remained in utter ignorance.

CHARLES.

But is there not sight in the eye, taste in the tongue, or sound in the ear, when they are not actually seeing, and tasting, and hearing ?

DR. HERBERT.

Just as much as there is music in a flute, writing in a pen, fire in a billet of wood, a statue in a block of marble, or a philosopher in a man. If you have observed any result with regard to the placing of any thing in any circumstances ; and if you again meet with the same thing, or a thing exactly similar, you cannot help believing, that if you place it exactly in the former circumstances, you will have the former result ; but the time at which there is no change is a time of ignorance : and if one who had no former knowledge should come then, he would go as wise as he came, and no wiser.

I have felt it necessary to be thus particular upon the proper nature and limits of the senses, as sources of information, because this is the point at which, not the ignorant only (and they are not to be

blamed), but many of the most philosophic upon other points, jumble the nature of the senses and the mind.—By investing the mutable and perishable organ with those perceptions, that knowledge, and that reflection and comparison, which belong only to the immutable and indestructible mind, they fail in their attempt, and bring down the mind to the mutable and mortal organ ; as if a man, by binding the millstone and the lead to the eagle, and attempting to make them all fly, should confine the eagle to the earth, and make the whole of the unnatural compound, millstone and lead all over.

## MARY.

Then, are our senses, which are to us the sources of so many pleasures, so very insignificant ?

## DR. HERBERT.

Nothing in creation is insignificant : the dullest organ of sense, the most insignificant object of growth, the simplest property of the simplest substance, has an ingenuity of structure, and an adaptation of purpose about it, which rise incomprehensibly, not in degree, but absolutely in kind, above the finest efforts of man's most cultivated art ; and there is, perhaps, none in which this is more wonderfully displayed, than in that organ of the sense of hearing, from the consideration of which we have made rather a long, though, I trust, not an unprofitable digression.

## EDWARD.

Those pulsations or waves in the air, to which you have attributed the change of state in the internal ear that produces hearing, are not mere motions of the air ; for though I drive the air ever so forcibly backwards or forwards at my ear, with my hand, I do not hear any noise ; I only feel a sensation of cold, the same as if the part against which the air is driven were exposed to the wind, and I feel that nearly as much in my hand as in my ear.

## CHARLES.

And if I strike a glass against my ear, the sensation is pain, and not sound ; while, if I strike the edge of it with the nail of my finger, as it stands on the table, there is a loud and continued sound, without any sensation of pain.

## DR. HERBERT.

The particular change of the air in the internal ear, which is the immediate antecedent of sound in general, or of any particular sound, is sensible only to that organ, and sensible only to it in the simple sensation of sound, which the ear, of course, has not the faculty of analysing, and of which the mind has no further information than that which the ear gives ; and the same may be said of the immediate antecedents in all cases of sensation, whatever may be the organ ; but we may be

assured, that the changes that produce sound are exceedingly delicate, in consequence of the minute variations, of which we can take notice.

## MATILDA.

That is peculiarly striking in the case of music. If a string be ever so little out of tune, or a note played ever so little out of tune, the ear detects it in a moment.

## MARY.

It is singular, too, why the voice, in singing, should obey the ear, since the one is the action of the throat and mouth, over which we cannot easily see that the ear can have any controul.

## DR. HERBERT.

It is the mind that controuls them both ; though, as the formation of the organ must have a considerable effect upon the sensation, or the motion, we need as little wonder at the accordance that sometimes exists between the organ of hearing and the organs of voice, as at the existence of a musical ear, which we often meet with, not only without accordant vocal powers, but without even that musical dexterity, that flexibility and rapidity in the motion of the fingers, which is essential to fine execution in the performance of music. In what these original differences consist, we cannot of course tell ; because they, as particular modifications of hearing, are, like that, known only in

their own existence, and in nothing else. That they have no connexion with the general activity of the mind, we must admit ; for it is proverbial, that the most skilful musicians have never been the most acute and intelligent of men. Neither are they indicative of a greater general perception in the ear ; for many of those that have had exquisite musical ears, have not only not been more sensitive to other sounds than those who have had no such musical sensitiveness, but they have remained listless under appeals of oratory at which the unmusical have been affected even to tears.

CHARLES.

May not a good deal of what is termed a musical ear, depend upon cultivation and practice.

DR. HERBERT.

Of that there can be little question ; and were we all to devote as much and as undivided attention to this single subject as the musicians do, there is no doubt that we should acquire some degree of perfection in it, just as we acquire in any other matter to which we direct our observation long and attentively.

EDWARD.

The power of music over the mind must have been much greater in ancient times than it is now ; for though there be a piano forte in almost

every farm-house, we do not find the beasts dancing to that, as they are reported to have done to the lyre of Orpheus.

MARY.

The beasts, I suppose, have become better used to it. You remember the shepherd's dog, that got into the church, and began to howl in accompaniment to the organ. Now, he could not know so much about music as our Ranger, who hears it every day, and never seems to be affected by it in the least.

DR. HERBERT.

And mankind were much less familiar with it, too ; and from want of general information, which has since been so widely diffused by the art of printing, they were credulous upon matters which are now generally understood, and, therefore, are not wonders at all.

CHARLES.

I have been reading the “Memoirs of Martinus Scriblerus,” since you last alluded to them ; there is a very amusing story there about the power of the ancient music, and the failure of a modern trial.

DR. HERBERT.

Suppose you should read it to us, Charles ; we shall not be the worse for a pause, or even a smile, if the story can produce one.

## CHARLES.

“ The bare mention of music threw Cornelius into a passion. ‘ How can you,’ quoth he, ‘ dignify this modern fiddling with the name of music? Will any of your best hautboys encounter a wolf, now-a-days, with no other arms but their instruments, as did that ancient piper, Pythocaris? Have ever wild boars, elephants, deer, dolphins, whales, or turbots, showed the least motion at the most elaborate strains of your modern scrapers, all which have been, as it were, tamed and humanized by ancient musicians? Whence proceeds the degeneracy of our morals? Is it not from the loss of ancient music? by which (says Aristotle), they taught all the virtues? Else might we turn Newgate into a college of Dorian musicians, who should teach moral virtues to the people. Whence comes it that our present diseases are so stubborn? Whence is it that I daily deplore my sciatical pains? Alas! because we have lost their true cure by the melody of the pipe. All this was well known to the ancients, as Theophrastus assures us, (whence Cœlius calls it *loca dolentia decantare*,) only indeed some small remains of this skill are preserved in the cure of the Tarantula. Did not Pythagoras stop a company of drunken bullies from storming a civil house, by changing the strain of the pipe to the sober spondæus? and yet your modern musicians want art to defend their windows from common nackers. It was well known, that when the Lacedemonian mob

were up, they commonly sent for a Lesbian musician to appease them, and they immediately grew calm, as they heard Terpander sing. Yet I don't believe that the Pope's whole band of music, though the best of this age, could keep his Holiness's image from being burnt on the fifth of November.'

“ ‘ Nor would Terpander, himself,’ replied Albertus, ‘ at Billingsgate, or Timotheus at Hockley in the Hole, have any manner of effect, nor both of them together, bring Horneck to common civility.’

“ ‘ That's a gross mistake,’ said Cornelius, very warmly ; ‘ and to prove it so, I have a small lyra of my own, framed, strung, and tuned after the ancient manner. I can play some fragments of Lesbian airs, and I wish I were to try them upon the most passionate creatures alive.’

“ ‘ You never had a better opportunity,’ says Albertus ; ‘ for yonder are two apple-women, scolding, and ready to uncoif one another.’

“ With this, Cornelius, undressed as he was, jumps out into the balcony, his lyra in hand, in his slippers, with a stocking upon his head, and a waistcoat of murry-coloured satin upon his body : he touched his lyra, with a very unusual sort of harpegiatura, nor were his hopes frustrated. The odd equipage, the uncouth instrument, the strangeness of the man and the music, drew the ears and eyes of the whole mob that were collected

about the two female champions, and, at last, of the combatants themselves. They all approached the balcony, in as close attention as Orpheus's first audience of cattle, or that at an Italian opera, when some favourite air is just awakened. This sudden effect of his music encouraged him mightily; and, as it was observed, he never touched his lyra in such a truly chromatic and enharmonic manner, as upon that occasion. The mob laughed, sung, jumped, danced, and used many odd gestures, all of which he judged to be caused by the various strains and modulations. ‘Mark!’ quoth he, ‘in this, the power of the Ionian; in that you see the effect of the Æolian.’ But in a little time they grew riotous, and threw stones. Cornelius then withdrew.

“‘Brother!’ said he, ‘do you observe that I have mixed, unawares, too much of the Phrygian? I might change it to the Lydian, and soften their riotous tempers. But it is enough: learn from this example to speak with veneration of the ancient music. If this lyra, in my unskilful hands, can perform such wonders, what must it have done in those of a Timotheus, or a Terpander?’ Having said this, he retired, with the utmost exultation in himself, and contempt of his brother; and, it is said, behaved that night with such unusual haughtiness to his family, that they had all reason for some ancient *Tiliocen* to calm his temper.”

EDWARD.

How very absurd it was to suppose that music could possibly have such effects.

DR. HERBERT.

We are all a good deal readier to notice and ridicule the credulities of others, than to take care of our own ; and it is by no means impossible, that the writer who, in the extract that has just been read by your brother, has so admirably ridiculed the effects ascribed to the ancient music and musicians, had not made up his mind whether he should or should not believe in the consciousness of knowledge, in addition to knowledge itself. We are never so apt to fall into credulity ourselves, as when we are laughing at the credulity of others.

MATILDA.

Even now there is great pleasure in listening to music.

DR. HERBERT.

No doubt of it ; and when we cultivate an ear for music, we are cultivating the means of a very refined and very harmless pleasure ; only we must be careful to keep it within due bounds ; unless we have to depend upon it for our living. The excessive or exclusive cultivation of such a feeling as this, is unfavourable to feelings and pursuits that are, in themselves, more valuable. If the

husbandman were to spend all his time in gazing upon the beauty of the landscape, or the gardener in smelling the odour of the flowers, the fields would soon cease to be beautiful, and the flowers would very soon wither, or become choked with weeds.

MATILDA.

But we may reckon the pleasure of music the chief pleasure that we derive from the sense of hearing, just as the pleasure of perfume is the chief one that we derive from the sense of smell?

DR. HERBERT.

If there were nothing but the individual,—if we had no knowledge of the external world,—if we were not linked to the society of our race, and had no labours and duties to perform, it might be that the sounds of music, if they could in such circumstances be heard, would be among the most delightful and valuable of our pleasures ; but still, in themselves, and without the association of other trains of thought, we should derive no knowledge from them, but the succession of pains or pleasures that arose from the succession of sounds. What we call the pleasure of music, is not a simple pleasure, arising from the sound alone. The feelings of our fellow-men mingle with the strain—the affection of the lover and the friend, the innocence of pastoral life, the boldness of the mariner, the devotedness of the patriot, the joy of the

happy, or the misery of the unfortunate, with all the other varieties and charms of life, blend with the music; and that which, in itself, is nothing more than a succession of simple sounds, to each of which, singly, no meaning is attached, becomes, by the suggestions of memory, and the colouring of fancy, a delineation of nature, or a drama of human life, in the contemplation of which, information from all the other sources of mental affection, external and internal, comes in aid of the mere sensation of the ear; and nature, in all, her forms, and man, in all his moods, blend with and give interest to the lay.

## CHARLES.

When I heard Braham sing “The Storm,” the sky, with its reeling clouds and its rolling thunder, the sea, with its billows of foam and its dells of darkness, the struggling of the ship, the shouting of the pilot, the activity of the sailors, the creaking of the partial wreck, the momentary despair at each fresh disaster, the start anew for life, the deliverance in the hour of peril, the glee, the bustle, and the thankfulness of heart, all came before me with so much freshness and force, that I lost sight of the singer and the stage, and fancied myself on board the vessel, and an active partaker in all the vicissitudes.

## EDWARD.

And who could hear “Scots wha hae,” sung,

or even hear the air played, without seeing the gallant little army kneeling down in their devotions, which were to hallow to their deliverance or death, or the Bruce himself dashing forward to assail the defier, and be the foremost to win victory in the memorable field ?

DR. HERBERT.

It is even thus, from the associations with which they are linked, that the old national songs take so powerful a hold upon the feelings and memories of the people, and retain their interest and their popularity, while the airs that are warbled in succession at the theatres and opera houses, how scientifically soever they may be set, and how sweetly soever they may be sung, perish after a season, and are forgotten. If we are to have this pleasure of the ear a permanent pleasure, we must make it something more than mere melody—we must weave it into the tissue of time, and find in other trains of thought some antecedent that shall call it up as a consequent, besides the mere succession of the musical notes.

MARY.

Then it is not so much the mere music, as what we may call the interpretation of the music, that affords us pleasure ?

EDWARD.

But the interpretation must be in that of which

the music puts us in mind ; for when unaccompanied by a song, there is no meaning in the notes of music, as there is in the words of language.

## CHARLES.

I think that, considering them as mere sounds, there is just as much meaning in the one as in the other. If the case were different, we should be able to understand any foreign language, such as French, without the labour of learning it, just as we do our native tongue.

## DR. HERBERT.

Our native tongue costs us more labour in the learning than any, or than all other languages put together, only it is begun so early, and the labour is so gradual, so uninterrupted, and so eclipsed by the more interesting knowledge of things that we acquire along with it, that we do not heed the steps of the acquirement. The pleasure that we permanently derive from music we derive from it as a language ; and the chief difference is that the interpretation of the music lies in a few scenes and feelings, while that of words is as long as the history of man, and as extended as the boundaries of his knowledge.

## CHARLES.

Language is the only means of communication between one human being and another ; and if

men could not have communicated their plans to each other, they would have been more helpless than the other animals, which, if they had the same means of acting in concert that we have, would never have allowed us to sway the sceptre over them as we do.

## MARY.

You forget, Charles, that there is a language of gesture and expression, as well as a language of words. It is possible to agree, or refuse, or applaud, or reprove, by a look ; and our eyes tell whether a person is in good humour or in bad, from the gestures of the body, or even the gait in walking, though the person so observed never utters a syllable.

## EDWARD.

The birds and beasts too have a language of this kind. Dogs and horses know their old acquaintance, and even the humour that each other are in.

## DR. HERBERT.

As these are their only means of communication, perhaps they may have them in greater perfection than we have, just as their senses and organs of motion and self-preservation are much more perfect at their birth, and do not stand in need of that cultivation without which ours would

be so feeble. Between them and man there is however this difference, that their language, whatever may be its value and import to the individual, is not handed down from generation to generation, and accumulated in the course of time. The dogs of the present day do not profit by the experience of those that lived an age ago ; while man, by the aid of language, profits by the experience of ages that have long gone by, even though not a trace of those ages should remain but the simple benefit that has been conferred. Man enjoys the benefit long after the benefactor is forgotten ; and of the implements and operations that are in most common and of most important use, there is hardly one of which we with certainty know the original inventor. Who made the first plough, or the first knife, who first wrote with a quill, or even who contrived the first alphabet, are questions which admit of no satisfactory answer.

## CHARLES.

One cannot help noticing the extreme delicacy of the senses in animals. A dog will read the expression of our countenance with far more apparent acuteness than a peasant ; and not only so, but he understands language, as he returns a kind word by caressing, and an angry one by crouching, if you be his master, or running off, if you be not. These indicate in them something more than mere external sense.

## DR. HERBERT.

Their approximations to reason are certainly very astonishing,—so much so, that if we found them guilty of the same blunders of which we are guilty, we should be apt to conclude that they proceeded by opinion and argument in the same way that we do; but we observe, from the unerring nature of their conduct, even in circumstances in which the individual could never have been placed before, and in which, therefore, he could not be guided by any thing like comparison and experience, that their rules of conduct are of that class, which, in our own case, we can neither deny nor resolve into any former experience; and, therefore, we call them intuitive perceptions or instincts.

## MARY.

But still they are capable of being taught by experience. If they have been deceived with anything, they will avoid things that are similar for the future; and we may make them docile or amusing, if we take pains with their education.

## EDWARD.

Even in a wild state, they have the means of acting in concert. I have read, that the sheep in mountain pastures form themselves in battle array to protect the helpless of the flock from the foe; that the beavers act in bands, in the conducting of their curious architecture; and even the wild

geese upon their aërial march, are formed in order, and have a scout in front, and a guard in the rear.

#### CHARLES.

If any one disturbs a bee-hive, the bees flock out in numbers, and sting, which they never attempt, if you do not interfere with them, or their operations; and if you merely look at an ant-hill, the little creatures carry on their labours without appearing to take any notice of you; they carry their grains of corn, and flies, and beetles, singly or in concert, according to the weight: but the moment that you attack the hill, they appear upon the breach, and give you battle, if you do not retreat.

#### MATILDA.

Even in the spiders in the garden, there are singular instances of skill. I do not so much mean the construction of their webs, as the means they take for their own safety. They appear to be all cannibals; and the largest one, the one that seems capable of spinning the greatest quantity of thread, in which they enmesh each other, appears always to be the victor. This they appear to know by the weight, and have many means of guarding against. When one approaches the web of another, he feels at one of the threads, and if he be smaller than the owner of the web, he retreats; if not, he advances, and the other retires

along one of the main threads, and if he be pursued, he either lets himself down by a thread, by which he can again ascend, or he cuts the main thread, and lets the assailant drop, web and all.

## DR. HERBERT.

One of the most singular approximations to reason that I ever heard of in the animal world, happened in the case of a Newfoundland dog that belonged to a gentleman whom I once knew. The dog was large and docile, and, generally speaking, good natured. About noon every day he was sent to the village, about a mile distant, for bread, which was tied in a towel, and the dog, carrying the parcel by the knot, always delivered it very carefully, and had his dinner when his task was completed. One day he returned dirty, with his ears scratched and bleeding, and was sulky; but he delivered his charge with the same safety as ever. When the servants went to give him his dinner, they found that he had left the house, and was making across the fields for a farm that was on the brow of a hill about a mile distant. There was a mastiff at the farm, with which he had had disputes before, and they concluded that he had gone there with a hostile intention. When he came to the farm, the mastiff and he conversed as dogs do for some few minutes, and then they set out for a mill, about a mile distant, in another direction, at which there was a large bull-dog,

ot, generally speaking, a friend to either. They onversed in the former manner with the bull-dog, after which the three set off in company, and avoiding the house of the first one's master, which they would have had to pass had they taken the nearest road, they arrived at the village. The village curs began to yelp and snarl, at which the three powerful confederates were roused, and proceeded to kill every cur as they went along, their manner being so ferocious that none of the villagers would approach them. When they had completed the massacre, they went and washed themselves in a ditch; after which they went straight to their homes, and quarrelled as before the very next time that two of them met.

EDWARD.

That is very singular.

DR. HERBERT.

It is not more singular than true. The combination of those who were in general not friends, for one common purpose, in which only one had been engaged at the first, might seem a little puzzling, if we did not take it into the account, that dogs are in their wild state gregarious, and hunt their prey in packs, and that, therefore, an instinct of combination or association is as much a part of their nature, as the hunting of those animals that are their prey.

But what should have taken them to the village? or made them attack the dogs there?

DR. HERBERT.

The curs had set upon the Newfoundland dog, when he was in charge of the parcel, and his instinct of fidelity overcame for the time his instinct of revenge, though the latter was left to act as soon as the former was at an end.

EDWARD.

The expedition appears to have been planned with more skill, and executed with more decision, than many human expeditions.

DR. HERBERT.

No question of it; and that is the very reason why I told you the anecdote. That which we consider as the perfection of human reason, is really not human reason at all. Our intuitive belief, the instincts of animals, the growth of plants, the properties and phenomena of matter, are the facts themselves, while our reasonings are only the comparisons of one fact with another; and as we can never be certain that we are in possession of all the circumstances that must meet together, before that fact can follow them, as a consequent or effect, we can never arrive at that unerring certainty which takes place in nature. The one is that which we seek to know; the other is our knowledge of it. Our knowledge may be

imperfect or faulty, but the fact or phenomenon can be nothing but itself. The oyster, in the construction of his shell ; the tree, in the expansion of its blossom, and the ripening of its fruit ; the stone that falls to the earth, or the lead that sinks in water, are all far more certain and unerring, than the judgment of man, even when he flatters himself that his philosophy is the most perfect.

CHARLES.

And are our faculties of reason really of less value than the instincts and qualities of the other parts of creation ?

DR. HERBERT.

By no means ; they are of a higher order. The instinct perishes with the animal, and the quality of the substance is at an end when the substance is decomposed and the parts of it enter into new compounds ; but the mind of man lives at all times, and in all space ; and it does so through that very sense of hearing which has led us into those digressions. The instincts of the animals may produce a few results, that to us appear, in their certainty, superior to human reason : just as we feel that we have not the eye of the eagle, the scent of the dog, the fleetness of the deer, or the strength of the elephant ; but all these arise merely out of the present wants of the individual ; when those wants are satisfied, he lays him down to sleep ; and when his body is exhausted, he lays

him down to die, and there is an end. But by the faculty of thought, and the sense of hearing, with those inventions which have enabled us to hear with the eyes, and collect upon the shelves of our libraries the vivid memory of all the wise things that ever have been said, and all the brilliant things that ever have been done, a man can sit here in England, and contemplate the universe, in all its known parts and forms, and at every step of its eventful history. What is the most acute sense of any single object, compared with that power, before which space and time are as nothing, but which can concentrate into the wonderful *here*, and the yet more wonderful *now*, all of present or of former nature that is known? As our knowledge is nothing but the states in which the mind exists; so the mind existing in a state, is to us that state itself. We can not only follow the track of every traveller upon the land, and every mariner upon the deep,—we can not only be this moment amid the snows of Spitzbergen, and the next on the burning sands of Lybia,—we can not only now riot in the spicy groves of the East, and taste the delicious fruits of the Oriental Archipelago, and be the next moment among the blazings of volcanoes, the rockings of earthquakes, and the ruins of mountains on the table land of the Andes,—we can, as mental beings, not only bound away from the earth itself, stand where we will in imaginable space, see it turning round, and exposing its successive longitudes to the alternation

of day and night, and its hemispheres by turns to the succession of the seasons ; but we can contemplate all sides and points of it at once, and condense the year, with all its changes, into a single moment. Would we listen to Demosthenes, or to Cicero,—would we struggle for freedom at Platæa, or at Marathon,—would we reason with Plato, or doubt with Pyrrho,—would we be throned in the Capitol with Augustus, or sit with Marius upon the ruins of Carthage,—it is accomplished by a single volition, and the mind is at the most distant point of space, or the remotest of time, before the finger can be moved, the breast give one pulsation, the ear catch a sound, or the eye vary a glance.

It is this which gives to man his superiority, that stamps upon him a character, and imposes upon him a responsibility that do not belong to any other part of that creation which comes within his view. From the first man that ever reflected, to the last that shall be left upon the earth, there flows one vast and unbroken current of knowledge. In this current every individual may mingle, grasp all its more remarkable attributes, and add to it the new combinations that have arisen from his own experience and invention ; and whatever of great or of good he himself shall connect to this immortal stream, cannot be lost, but will float down for the information of other minds, when he and all the things which contributed to his mortal existence shall be quite forgotten.

Therefore, the true glory of man consists not in that which he accumulates or builds, in that over which he bears the sword of conquest, or sways the sceptre of power. In that strife, one nation succeeds another; one conqueror lays the palaces and strong holds of a former level with the dust. We inquire for Nineveh—it is an empty name; for Babylon—and which is the heap? for Tadmor—it is a few blocks of mouldering stone in the wilderness. The glories of Greece are no more; the Acropolis is spoiled of its temples; the Areopagus is empty of its judges: there is no orator in the rostrum, and no sage at the porch. Every vestige of the “house of clay” is gone, save that which is even more mournful than if it were not; but the spirit is as green, as fresh, as living, and as life-giving as ever. The words of wisdom, the wonders of eloquence, and the witchery of song, have not perished—and they will not perish, but remain to awaken new admirers and call other minds into emulation, until the general current of thought shall stand still, or be turned into a channel of which we have at present no knowledge.

CHARLES.

And all this depends upon the sense of hearing?

DR. HERBERT.

It may be, in some respects, said to depend upon

that sense, inasmuch as without the means of communication from individual to individual, and of transmission from age to age, it could not have existed ; and without hearing and voice, which, as is evident, must exist before written language, the knowledge of man would have been limited to the results of his own individual experience ; and when we consider how little most individuals contribute to the stock, notwithstanding the advantages that they derive from that stock, and their possession of the sense of hearing, and the faculty of communication, we cannot suppose that without these their advances could have been very great.

## EDWARD.

And yet from the mere sense of hearing we could not have derived even the slightest idea of the existence of an external world, or the existence of our bodies ; and nothing, in fact, but the mere sounds, as producing pleasure or pain.

## DR. HERBERT.

Not even “as producing” pleasure or pain ; but as being in themselves the pleasure or the pain that we feel, and nothing else ; and the pleasure or the pain being the feeling of the sound, and nothing but that feeling, not originally referrible to the ear, or the auric nerve as an organ of hearing, any more than to the external body, to which, from the evidence of experience, we learn subse-

quently to attribute the sound. We speak of sound, as being something external of the body, and of the organ of hearing as being something external of the mind—not because we could come to such a conclusion from the sensation of sound once felt; but merely from experience in the presence of the body, which, from that experience, we learn to call sonorous; of observing it struck or otherwise acted upon, so as to produce the state that we call sounding, and of observing that the sound varies as the ear is open or shut, or healthy or diseased. If we could hear the sound, which we now call the sound of a violin, without the presence of the violin, or with its presence, and nobody playing on it, would we continue to call it the sound of a violin?

MARY.

Certainly we could not; but it might be like the sound of a violin; and if we had been accustomed to hear that instrument, we could not hear a sound like that which it produced, without thinking on the violin and the playing.

DR. HERBERT.

That is exactly the conclusion at which we wished to arrive. The ear informs us of nothing but the sound; we do not hear the shape of the instrument, or the act of playing, which are necessary in order to enable us to refer the sound to a particular instrument, and to a particular

act; and, therefore, if our means of information had been limited to the single sense of hearing, our knowledge would have been confined to the mere sensation of sound; and though a skilful succession of musical notes might have given us the very same mental pleasure that they give us now, we could have known nothing of voices or of instruments.

CHARLES.

And we could not have derived those pleasures from music, to which we have already referred, as resulting from those scenes in nature, and those actions of human life, which we are now enabled to associate with the airs, and which certainly produce stronger emotions in the mind than could be produced by any mere succession of sounds, however perfect in harmony, or however sweet in melody.

MATILDA.

And if we had no other sense than that of hearing—at least, no other means of knowledge than that conveyed by the ear—we would have had no meaning in language, but must have regarded it just as we do the notes of an air that belongs to another country, and to other associations than those with which we are acquainted.

DR. HERBERT.

No question of it.

## CHARLES.

In like manner, if our single sense had been that of taste, or of smell, we should have had no knowledge, but the pleasure or the pain which resulted from those feelings ; and could not have known that there was a rose to be smelt, or a peach to be tasted.

## EDWARD.

Nay, we should not have known that there was a nose with which to smell, or a tongue and palate with which to taste.

## DR. HERBERT.

Just so. In each of the three senses whose phenomena we have considered, there is nothing communicated but the sensation itself. Nor could it be otherwise. The action upon the organ of sense, whether that be produced by odoriferous particles, as in the sense of smelling ; by sapid particles, as in the sense of tasting ; or by waves, or successive pulsations of the air, as in hearing, is still, after all the experience we have of it, nothing more than the contact of one piece or description of matter with another piece. Not only this : for it is a contact so very gentle in its operation, so momentary in its influence, so perfectly obliterated when the contact ceases, that there is not a physical trace of its effects even for a single instant. The odoriferous particles which affect the olfactory nerves in the cavity of the nose,

are so perfectly minute, that we cannot trace them by the finest instruments that art has invented ; and from the immense distance to which a very small portion of odoriferous substances, such as a grain of musk, or assafoetida, diffuse their odours, and the length of time that they continue to do this without any apparent waste of their substances as matter, we are led to ascribe to the particles by which those nerves are excited, a minuteness of which we have hardly any conception, and which we can never hope to trace by any other sense than that to which they address themselves spontaneously, and without assistance from our art. So, also, in the case of tasting, though there be a certain analogy to chemical operations, we cannot easily discover—indeed we cannot at all discover—the specific change which makes one taste different from another—which causes honey to produce one taste, and wormwood, a taste which we call the very opposite. In the sense of hearing, too, not only the particles of the atmospheric fluid, but the motion upon which hearing depends, are not matters of direct observation ; the sound which comes to the ear in the voice of thunder, or the bursting of a volcano, is so very gentle, that it would not bend a rush, or break a cobweb, at any considerable distance from where the antecedent explosion takes place ; and a sound may be loud in the ear, while it is utterly impossible to discover the slightest change in that atmosphere which is the immediate cause of the sensation of hearing.

## MARY.

And scents, and tastes, and sounds, may all be so strong, that the sensation of them may be exceedingly painful.

## DR. HERBERT.

No doubt they may ; but the pains which they produce have very little resemblance to that to which we are accustomed to give the name of bodily pain, as arising from an external injury, such as a wound or a bruise, or an internal derangement, as in a head-ache. When the organ of sense in the senses, to which we have already alluded, is pained by the strength of the sensation, there is not only no permanent derangement of its parts, but there is no actual pain, in the common acceptation of the term.

## CHARLES.

I have read of soldiers and sailors becoming quite deaf amid the continued roar of their cannon ; and I have also heard that some persons have entirely lost their hearing from exposure to loud and sudden sounds.

## DR. HERBERT.

The first of these cases occurs very frequently ; indeed, invariably, unless the parties stuff their ears with wool or cotton, or otherwise prevent the violent concussion of the air from being propelled

into the internal cavity of the ear ; but the effect thus produced is not produced upon the ear, necessarily, as an organ of hearing ; it is a mechanical effect, the same as would result from a blow or a thrust, which made no sound at all ; and the only difference consists in it being a mechanical injury, done by a rare substance in extremely rapid motion, rather than by a dense one, of which the motion is slow. In like manner, though the case be not quite so explicable, it may be concluded that the dazzling of the eye, which arises from gazing intensely upon a brilliant object, as upon the sun, or that extinction of sight which is sometimes produced by sudden or violent inflammation, is brought about by mechanical means, analogous rather to those that would bruise or lacerate any other part of the body, than by a mere affection of the eye as the organ of sight.

It was necessary that we should consider the operations of those simpler senses at some length, before we proceed to those of which the operation is more complex, in order that we might avoid the error into which so many have fallen, of attributing to sensation and the organs of sense, faculties which we cannot imagine to belong to them as matter ; and which, by being imputed to them, lead us to confound our external body, which is mutable and mortal, with our internal mind, of which we cannot imagine the essence, whatever it may be, to be in any way changed, and of which, if we were in any way to predicate mortality,

which is nothing but dissolution, we should concede at once the spiritual existence, nay, the existence altogether, and end in the most singular paradox into which it is possible to be driven,—that man, while he is nothing but a combination of material organs, neither of which can, either singly or in combination, by possibility know any thing, is yet able, not only to extend his knowledge instantly over all time and over all space, but to rise from the contemplation of that which he must perceive to have been fashioned, to some knowledge of the Almighty Architect, from whom man himself, and all the wonders with which he is surrounded, have emanated.

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